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THE CANADA LUMBERMAN AND WOOD-WORKER

REACHES REGULARLY MANUFACTURERS, BUYERS AND SELLERS OF TIMBER PRODUCTS IN EVERY PART OF CANADA AND LEADING IMPORTERS ABROAD

VOLUME XXVII. NUMBER 1. | TORONTO, MONTREAL—JANUARY, 1907—WINNIPEG, VANCOUVER | TERMS, $1.00 PER YEAR. SINGLE COPIES, 10 CENTS.

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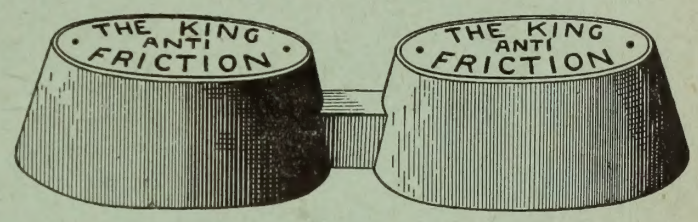

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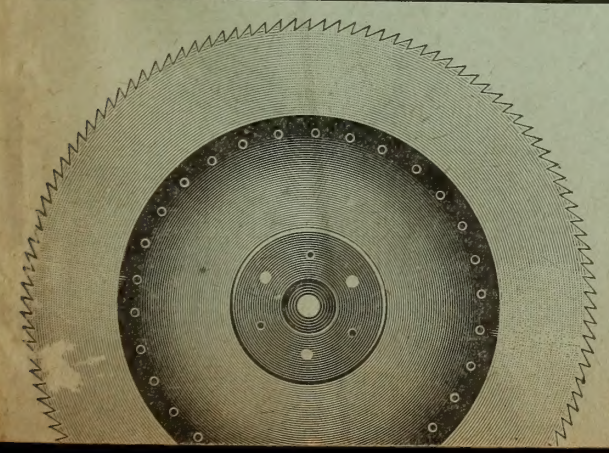

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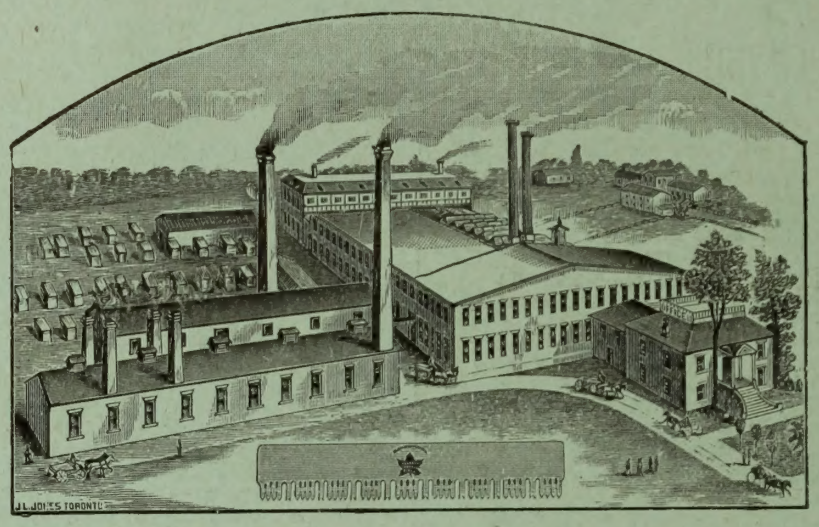

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Directions.—Place the set on the point of tooth, as shown in the accompanying cut, and strike a very light blow with a tack hammer. If you require more set, file the tooth with more bevel.

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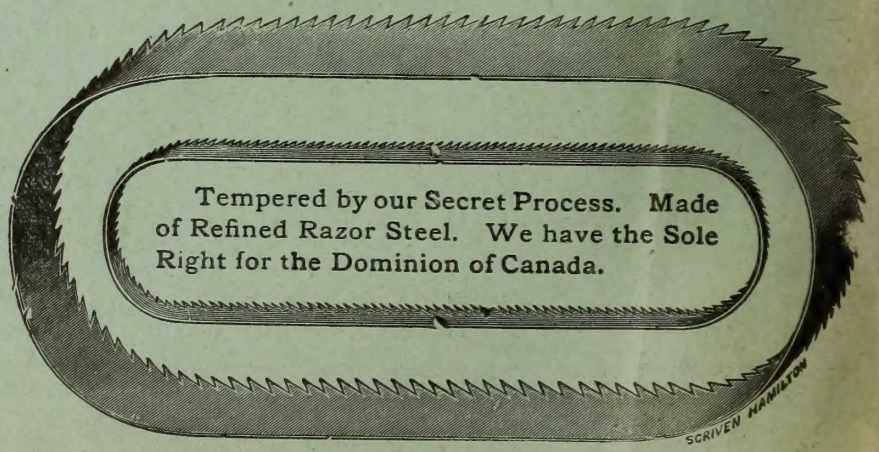
We are the only manufacturers in the world wh export Saws in large quantities to the United States.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HIGH GRADE BAND SAWS

Of All Widths and Lengths.

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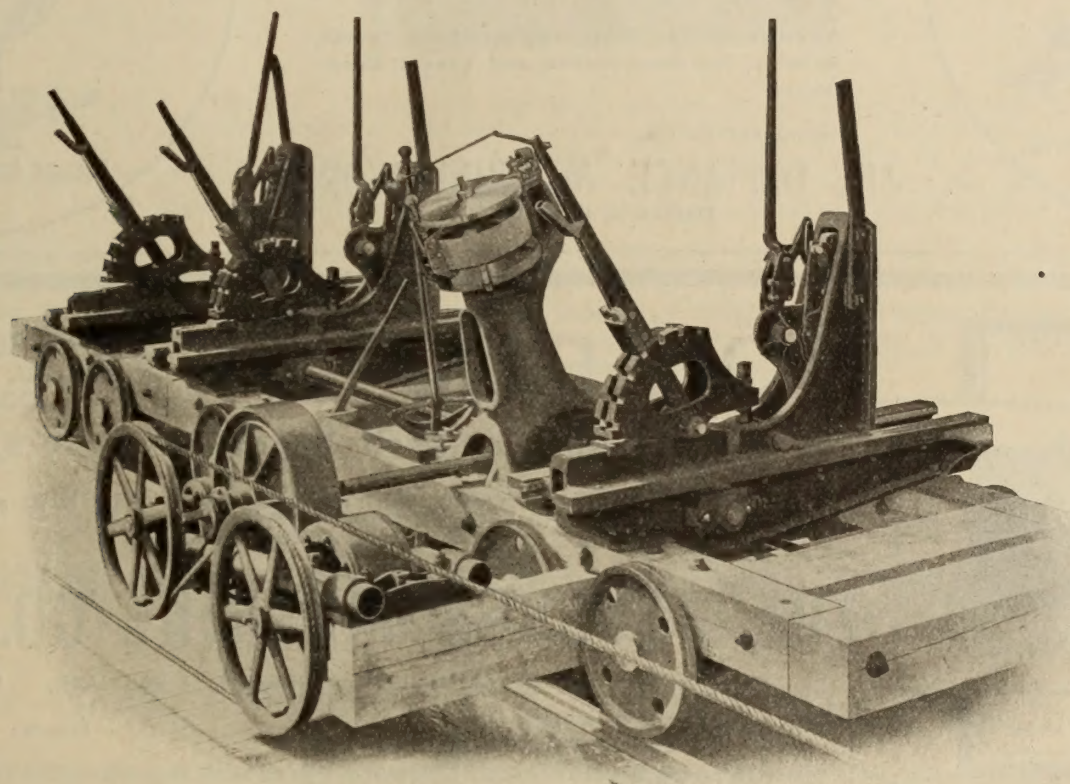

TROUT POWER SET WORKS

This is a view of the TROUT POWER SET WORKS applied to rack and pinion blocks. At the top of the set works is a dial carried on a bearing at the top of the controller shaft. It turns freely on this bearing but is connected with the shaft by means of an internal gear and pinion. The purpose of this is to operate the dial plate exactly in accordance with the movement of the knees so that the dial plate shows at all times the exact distance of the knees from the saw. Saw Mill Carriages and Accessory Machinery are fully described in Catalogue 123.

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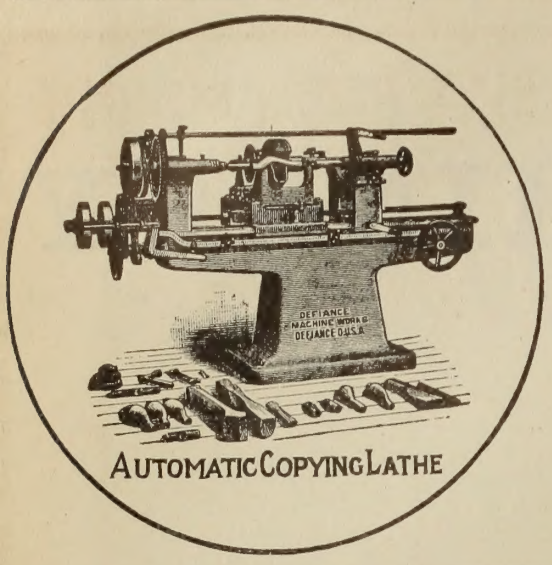

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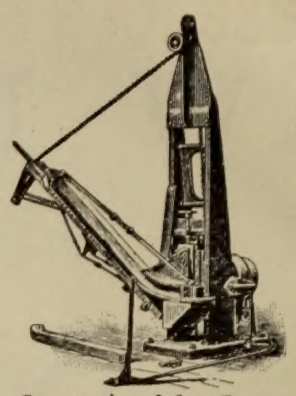
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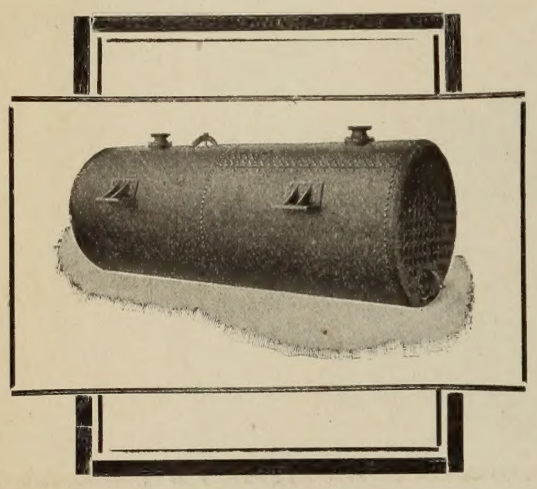

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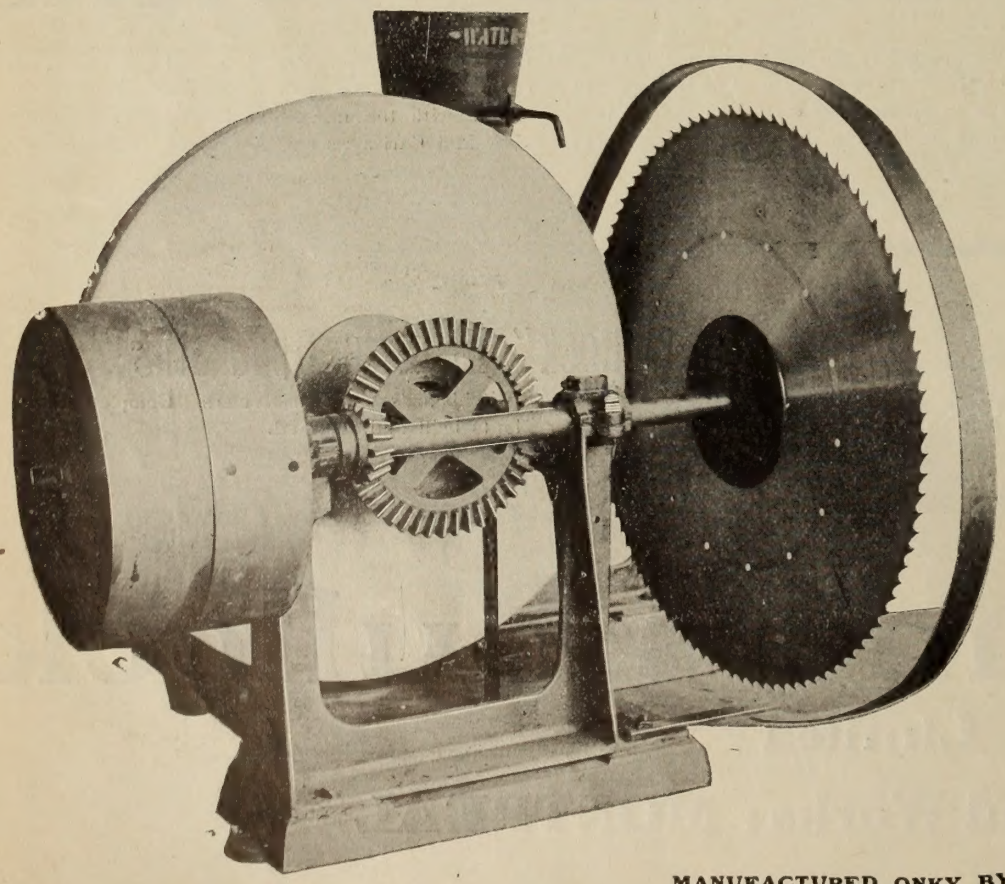

SHINGLE SAW GRINDER

FOR keeping down the thickness of shingle saws and thereby saving timber, we are now putting on the market a grinding machine. Several of these machines have been running in different mills for some months. It will at once be seen that we have made a radical change from anything at present on the market for this purpose. The saws are ground much quicker with the grindstone than with the emery wheel. It is also found that the grindstone does not roll the saws out of shape as the emery wheels do. The cut shows the machine so clearly that very little, if any, explanation is necesary. The shaft on which the saw is fastened is driven direct with the belt ; the grindstone being driven with a bevel gear and pinion. The grind stone is made to move back and forth by the cam. The grindstone shaft is not at right angles to the saw shaft, but at an angle equal to the taper on the saw. This angle can be made greater or less by turning the eccentric sleeve in which one end of the shaft runs. The position of the feeding cam can be adjusted in or out by slacking up the bolts holding it and pushing it in the direction wanted. The machine is simplicity itself, and as will be seen, is built very strong.

Over three hundred of our Upright "Simplex" Shingle Machines (wood and iron frames) are in use in British Columbia and Washington.

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"Cobb's" Packing is especially adapted to withstand heat and slightest pressure. The rubber core is oil and heat-proof and will not harden, but remain elastic indefinitely. The outside covering is made of material that is not affected by heat. The lubricant employed is the result of much scientific research and is absolutely free from grit or acids.

We make everything in rubber requisite for an engine room. The following are some of our specialties:

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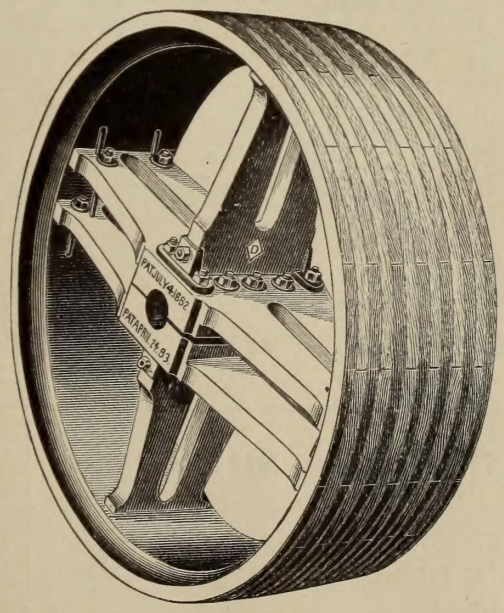
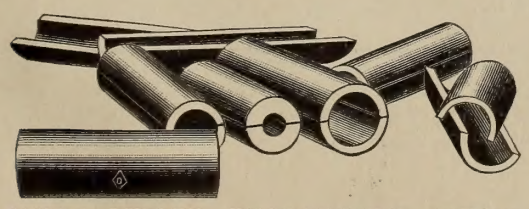
STANDARD WOOD SPLIT PULLEYS **FRICTION CLUTCH PULLEYS**

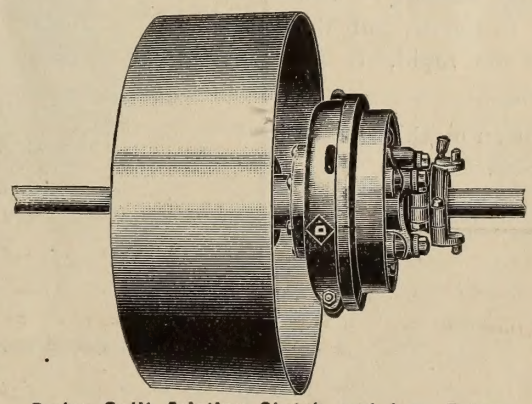
FOR SAW MILLS

We Guarantee Every Pulley.

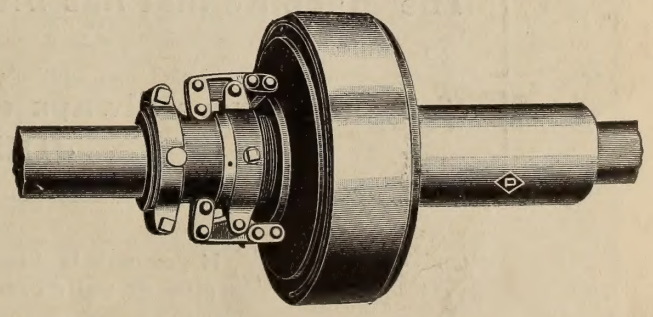




EVERY PULLEY THOROUGHLY NAILED



Dodge Split Friction Clutch and Iron Pulley.



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IRON FRAME UPRIGHT
SHINGLE MACHINE

Capacity 30,000 to 45,000 Shingles per ten hours. Adjustable for 16-inch and 18-inch Shingles.
Carriage is made to receive larger blocks than any other upright machine

REASONS

Its construction is simplicity itself.

It is the envy of all its competitors.

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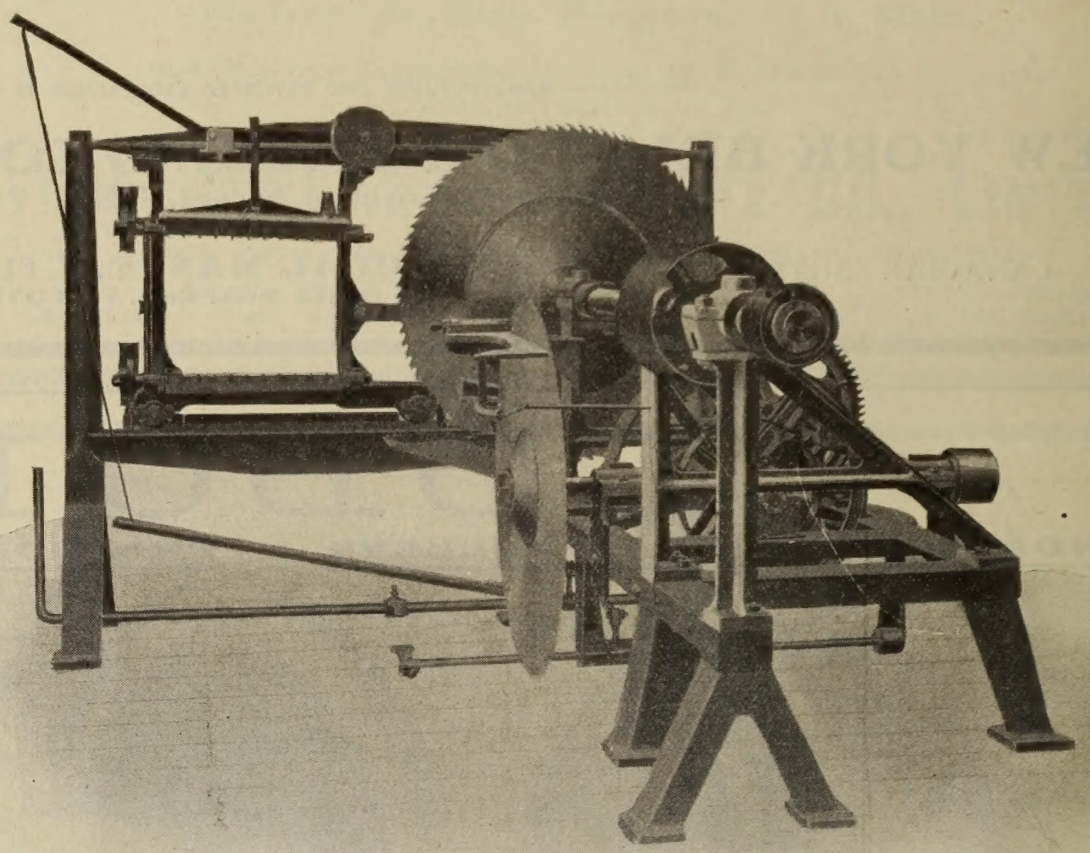
It has constantly added original improvements, which others try to follow, but the strides are too rapid, it always leads.

The Johnson machine is the only machine.



Front View of the Johnson Upright Shingle Machine

The Machine that has brought **BRITISH COLUMBIA SHINGLES** to the Front.

Shingle Buyers always ask for **SHINGLES** manufactured on the **JOHNSON MACHINE.**

If you are looking for the best Upright Shingle Machine give us your order, we will send you a Johnson Machine.

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The "LITTLE GIANT" working saves time, money, labor. Operated by one man. Will pay for itself in a very short time.

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One man will scrape by hand about two squares, or two hundred square feet of flooring in eight hours. The wage scale for this is from 30 cents to 40 cents per hour, or from $2.40 to $3.20 for 200 square feet, which is $1.20 to $1.60 per square.

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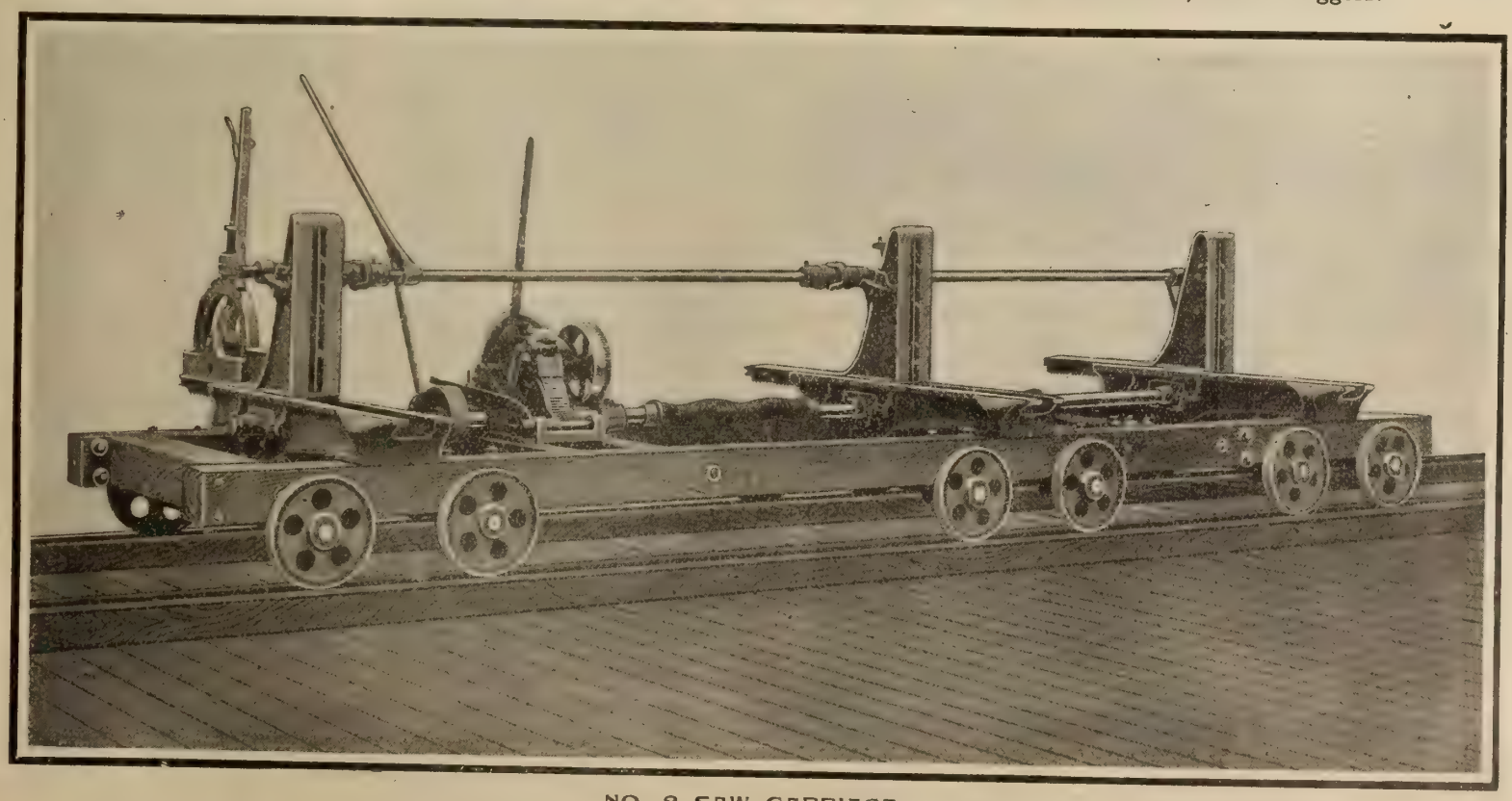

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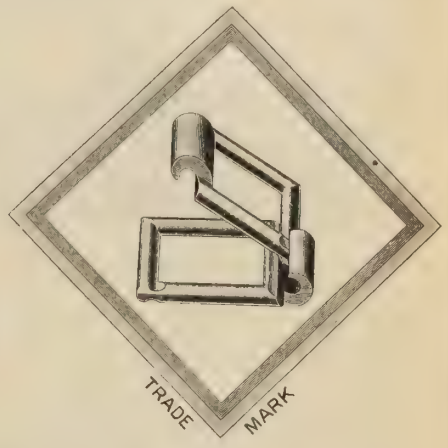

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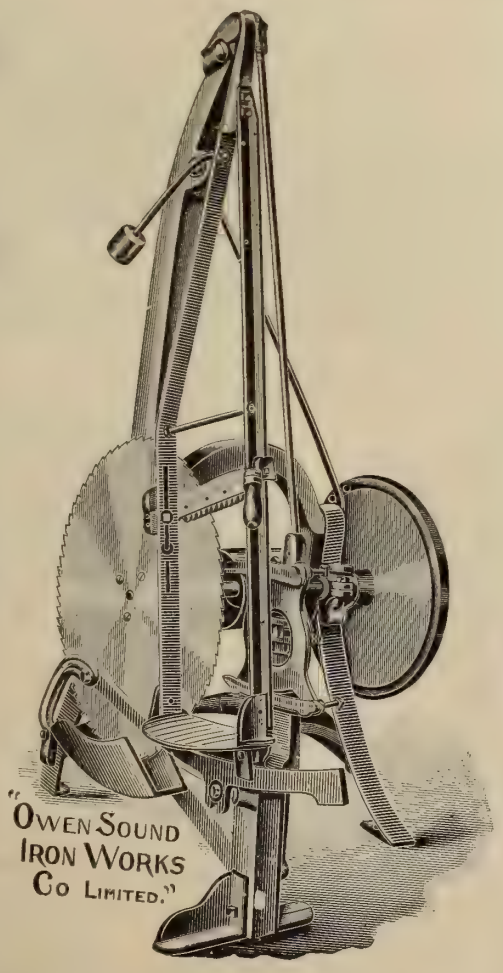

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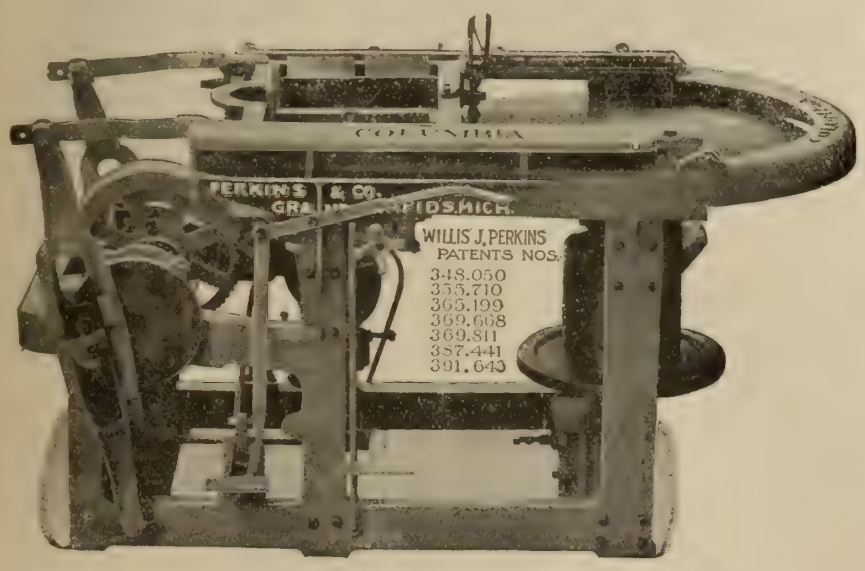

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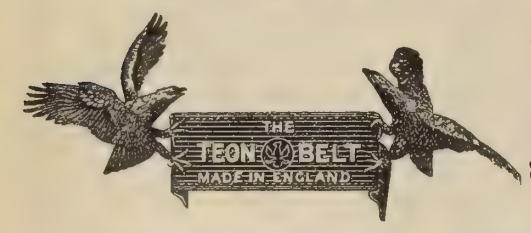

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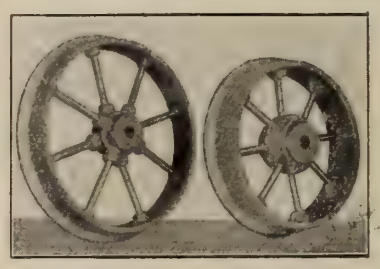

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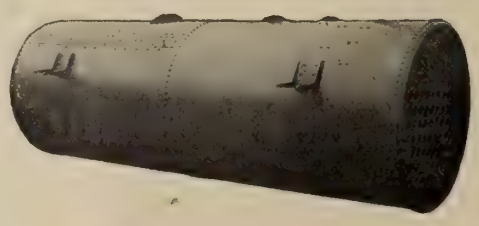

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VOLUME XXVIII. NUMBER 1. | TORONTO, MONTREAL — JANUARY, 1907 — WINNIPEG, VANCOUVER | TERMS, $1.00 PER YEAR Single Copies, 10 Cents

The Manchester Yards of The Imperial Lumber Company

On this page are shown two illustrations of the shed and yard of the Imperial Lumber Company at Manchester, England, which will give our readers a fair conception of the importance of their British branch.

The business of the Imperial Lumber Company in Manchester was begun in 1901, Mr. Lewis A. Grant having in that year formed a connection with the company as their Selling Agent, a position which he still holds. The chief office of the company in Manchester is in the Corn Exchange Building. The business of the Manchester office has been chiefly the handling of white and red pine deals, white pine sidings, and some special lines in the way of moulded skirting, dressed shelving and sheeting.

In 1904 Mr. Donogh visited Manchester, and while there completed the purchase of the large storage warehouse which had been erected by the Trafford Park Estates, Limited, when The Imperial Lumber Company first entered upon the handling of lumber in their own storage premises. Up to that time, all handling and storage of lumber and timber had been done under contract by the Manchester Ship Canal Company.

The growth of the British business necessitated the appointment of an assistant to Mr. Grant, and in 1905 Mr. A. B. Clark, formerly with the Francis Beidler Company of Chicago, was engaged to act as Assistant Manager. With the storage capacity of shed and yard, the Manchester agency is now in a position to handle to the best advantage the large export business of the company.

VIEWS OF THE MANCHESTER SHED AND YARDS OF THE IMPERIAL LUMBER COMPANY OF TORONTO.

The lumber shed is 400 feet long by 75 feet wide, and the yard connected with it has a frontage on two streets, with a roadway extending through the yard from one street to the other. The tracks of the L. & Y. Railway are laid into the yard, so that the lumber can be loaded direct from the shed to the cars. The shed has a storage capacity of three million feet B. M.

The headquarters of the Imperial Lumber Company, Limited, are at 1212 to 1220 Traders Bank Building, Toronto. They have mills at Latchford, Ontario, and a United States branch at North Tonawanda, N. Y. Mr. Charles D. Warren is president of the company, and Mr. G. M. Warren vice-president and general manager, while Mr. O. J. Donogh is secretary-treasurer and actively connected with the management.

The International Paper Company, of Corinth, N. Y., which acquired eight different patents for improvements in bark cutters, wood-sawing machinery, etc., from S. W. Butterfield, of Three Rivers, Que., finds that the patents have lapsed through oversight on the part of their attorneys, and they ask for an act to be passed enabling them to pay the requisite fees and reviving the patents.

The Need of A More Equitable Log Rule

WIARTON, ONT., December 6th, 1906.

Editor CANADA LUMBERMAN:

Dear Sir:—I have been an interested reader of the various articles published in your columns on the subject of log scales. I have given this subject much thought myself, and have made numerous practical tests, at different times and in different places, and comparing my conclusions from these tests with the list of rules, which you publish in this month's issue, I find there is only three that I can pronounce mathematically and practically correct, and one of these, the Vermont or Humphrey, only embraces logs of two diamaters. The other two are the Stilwell and the Ake; but perhaps if we had the whole rule as applied to logs of all sizes usually handled, we would have to find some fault with them too.

The trouble with mathematical calculations is that they deal with all logs as perfect, which is very far from the facts as found in every day experience, and in making practical tests it has usually been the custom to take only one, or at most only a very few logs of each size, while I claim that no test would be reliable unless say 100 logs of each size were cut by a good practical sawyer, with medium gauge saws, and an average struck, which would be approximately correct, and not as erratic as all hitherto practical test rules are. Thus as logs increase in diameter, the increase in product should be in proportion, and not in one place say a raise of 35 feet per inch, and in the next raise, where it should be more, it is only 20 feet. The International rule is perhaps as free from this objection as it is possible to get it, but it is far too high, and cannot be realized on the usual log scale, unless lumber thicker than 1 inch is cut (No. 1 common then), and I do not agree with the author that this should be taken into consideration in making a scale. If all logs were perfect, or if all log scalers were capable of reducing unsound logs to make them equal to sound straight logs in measurement, it would simplify the matter of log scale very much, but such is not and will never be the case,as my own experience has taught me that what is a visible defect to one is invisible to ninety out of every hundred of the others, and this cannot be provided against by the scale.

The Doyle rule should be abolished, and a consistent and equitable rule introduced in its place, as it frequently works great injustice to people who are not acquainted with its inconsistency, and neither buyer nor seller knows the price he is paying or getting until the last log (in a transaction) is scaled.

The International scale is too large all through, but more so on the larger sizes running from about 12 per cent at 8 inch to 25 per cent at 45 inch, which is as large as I have made tests on. My experiments and observations are such as to enable me to issue a scale that would be consistent and practical up to that size, and I would issue such a scale but for the fact that the Doyle Rule is so universally used that it would require a considerable time to have its use discontinued, unless the Provincial Government took the matter up and substituted a new scale. If this were done it would demand a different rate of Crown dues on logs, as if maintained at the present rate it would mean that the lumbermen would have to pay nearly twice as much Crown dues, where logs were small on an average. This rule would be based on the measurement of all sound straight logs the smallest way at the small end inside the bark, all unsound logs to be computed as their equivalent sound logs and no fractions of an inch to be taken into consideration except where a log was oval, when it should be measured both ways and the mean average diameter taken. The establishment of such a rule, that would give the correct contents in B. M. of all sizes of logs, would in my opinion be a decided benefit to the lumber trade, and prices would soon adjust themselves to the change which it would make in values.

The rule that is above laid down has been in force in theory but not in practice, the scalers who ignore the law being the men employed by the Government to make test scales in the different operations. Their reason for doing so is the inaccuracy of the Doyle Rule as applied to small logs, but when it comes to a 40 inch log, which is as much out as a 10 inch log, but the other way, they are not disposed to make allowance for the inaccuracy. They then plead the superior quality of the lumber as sufficient compensation for paying Crown dues on 25 per cent more than the log will produce. Taking the average run of logs as we now get them, and the prevailing method and practice of scaling,the advantage is on the side of the lumbermen, but as they bought their limits with this scale in force, anticipating a continuation of its use, it would be practically a confiscation of their rights to adopt a rule which would increase the amountto be paid in Crown dues. If an adjustment could be made that would overcome this point, I would welcome a scale that would give the practical contents in B. M. of all sizes of logs, cut with medium guage saws. I am of the opinion, and I believe the trade will bear me out in the claim, that manufacturers using saws thinner than the average do so at the expense of the quantity manufactured, and more mis-cut lumber, unless they employ more skilled labor at an increased cost, and in consequence are entitled to any over-run obtained in this way. This would also apply to cutting thick lumber or timbers.

Yours truly,

A. P. EBERT.

LUMBER SHIPMENTS SIDETRACKED.

December 22, 1906.

Editor CANADA LUMBERMAN:

Dear Sir: There have been many complaints from time to time from the lumbermen regarding the shortage of cars and the treatment meted out to them by the railway companies. It is a notorious fact that in the fall of each year just as soon as the grain begins to move, the lumbermon, who has contributed so largely to the support of the Railways during the other months of the year, must take a back seat, his demands for shipping facilities practically ignored, his business in many cases coming almost to a standstill.

Of course, we know the grain must be moved, and when as in the past few seasons the crops have been phenomenally large, it certainly taxes the railways somewhat heavily. Nevertheless, it seems to me that the lumbermen deserve a little more consideration and a little better treatment at the hands of the railways.

Rolling stock and motive power may be, and doubtless are being utilized to their fullest capacity, but there are many inconsistencies and seeming incongruities in their operation which if eliminated would result in a better service. Cars loaded with lumber are sometimes two, three, and even four weeks en route, although the distance to be covered might be made in less than ten hours of a continuous run. Then cars sometimes reach their destination regardless of the order of their shipment, some that have been shipped weeks before arriving after others that have only been shipped a few days. Here is a case in point: On the eighth of this month four cars of lumber were loaded and billed out from a mill in North Ontario. The shipper had been waiting for cars to load this lumber for about two weeks and the lumber is urgently needed by the consignee, yet on this date (December 22nd) these cars have not yet met their destination,but another car which was loaded and billed out from the same place some ten days later has already arrived. The lumber on this particular car was not urgently needed and no particular effort was made by the consignee to hasten it forward, whereas on the other hand the four cars above alluded to have been telegraphed about and the Railway Company applied to frequently, but all to no purpose. Here is one of the inconsistencies or incongruities, if you will, of railway operation; and the above is not an insolated case. I could mention many others of a similar kind which have occurred in my own experience.

How long, think you, would a mercantile concern remain in business who would treat their patrons in his fashion? Not very long, I fancy, unless as in the case of the railways they enjoyed a monopoly. And there is just the kernel of the whole matter, where the railways have no opposition from other railways or from water shipment they treat the shipper in just this kind of way, caring nothing for his convenience, knowing that he is completely at their mercy.

If any class of men should rejoice, then it is the lumbermen, as they see new lines of railway such as the Canadian Northern extending into the lumber districts of Northern Ontario—may they continue to extend is the earnest hope of

Yours truly.

"LUMBERMAN."

THE USE OF THIN CIRCULARS.

FESSERTON, ONT., Dec. 14, 1906.

Editor CANADA LUMBERMAN:

Dear Sir: Noticing an article in the July monthly number of your paper, headed "Thin Circulars for Log Saws," with no name signed, I expect the writer was ashamed to sign his name. He spoke of running a 72 inch 12 gauge circular at 1,100 revolutions, I expect he meant for one minute. I am a practical circular filer and claim to be able to hammer and fit a circular saw to run as good as any other filer, and if the gentleman who wrote that article is a filer, or knows of any other he may have reference to, I would like to meet him in a trial of skill. I claim a saw the size he quotes, viz., 72 in. diameter and 12 gauge from from eye to rim, will not run at any speed to make good straight lumber. I am an advocate of thin saws but don't go as far as the writer of that article. Hoping to see this little article in the January number of your esteemed journal, I remain,

Yours truly,

JOHN TRETHEWEY.

"IN FOREST LAND."

The American Lumberman, Chicago,announces the publication in book form of the poems of Douglas Malloch under the appropriate title "In Forest Land." The book celebrates in verse for the first time a character rugged and appealing, the "lumberjack," as the woodsman is colloquially known. The forest, its beauties,its people and its utilities are the author's all pervading thought, and into the forest and of the forest he has woven more than a hundred poems whose originality is striking and whose simplicity is charming.

No one can read the book and not believe that the author is in love with nature, particularly in love with her great forests. No one can read it without obtaining a new conception of the forest dwellers and forest workers. No one can read it without taking a more cheerful view of life and feeling a more intimate relationship with the trees.

There are men to whom the forest is a home and an occupation. They come into contact with the outer world but little. But their labors and environment give them nobility and picturesqueness. These the author of "In Forest Land" has portrayed with feeling and success. He has given to us a character almost unknown to literature and has put into that character's mouth a delightful philosophy, a quaint humor and simple and yet heroic ideals. Its vivid interest makes "In Forest Land" deserve to rank at once with the season's best literary offerings.

The forest, the lumber camp, the saw mill, the deck of the lumber schooner, and the river—these are the places to which Mr. Malloch has gone in search of his material, and he has given to the world a little volume which will rank among the best books of the year, not merely because of its literary merit, but because it strikes a new note in American poetry. He has brought home to us not only the forest with its peaceful calm and inspiring beauty, but he has taken us into the recesses of the wood and set us down among the swampers and skidders and opened up a mine of ingenuous sentiment.

The price of the book is $1.50 a copy, postpaid.

A HARDWOOD MILL IN THE BRUCE PENINSULA.

Located at Lion's Head, Ontario, in what is known as the Bruce Peninsula, is the sawmill of Pedwell & Lemcke, which may be classed among the best hardwood mills in Canada. Although small in comparison with vast establishments where logs of the white pine variety are manufactured, it is none the the less complete,and to the owners Mr. Charles Pedwell and Mr. Charles Lemcke, credit is due for their energy and enterprise.

The mill frame is 30 x 131 feet, with filing room 12 x 14 feet and sorting platform under cover 15 x 30 feet on the opposite side of mill and not shown in the accompanying photograph. The boiler house is 40 x 50 feet and contains two boilers with Dutch ovens,engine, heater, etc.

The equipment of the mill consists of a heavy Waterous carriage, steam loaders, steam nigger, gun shot feed, Waterous double edger, trimmers, live rolls, endless log chain, and three butting saws, one for slabs, one for cutting edgings into stove wood lengths, and one in rollers for cutting ties, timber, etc. Sixty inch circular saws, ten-guage, are used. They also operate a lath mill and two shingle machines. The filing room equipment is very complete, consisting of an automatic saw filer, etc.

The mill is equipped with conveyors for handling the sawdust and shingle refuse, which is delivered to the fire room, and the fine sawdust not required for making steam passes through into a hopper. The shingle

SAW MILL OF PEDWELL & LEMCKE, LION'S HEAD, ONT.

sawdust is all burned in order to reduce the fire hazard. The slabs and edgings drop into hoppers and are drawn away in carts.

The yard is equipped with two tramways for the purpose of conveying the lumber from the mill to the piles. There is about 500 feet of dock accommodation for loading lumber, slabs, etc.

Messrs. Pedwell & Lemcke own 7,500 acres of timber lands, which it is estimated will supply their mill for the next ten years. Their usual stock is about three million feet of lumber and two million shingles. This winter they will get out three million consisting of two millions of maple, beech and birch, and one million of hemlock and cedar.

RECIPROCAL DEMURRAGE CONVENTION.

The lumbermen of the United States are taking an active interest in the agitation to bring about an improvement in transportation facilities, and we would be glad to see corresponding activity on the part of Canadian lumbermen. A National Reciprocal Demurrage Convention is to be held in Chicago on Friday, January 4th, the call for which we publish below :

Whereas, by failure of railways engaged in interstate commerce to furnish cars as needed for the loading of commodities offered them for transportation, and by the failure of the said railroads after receipt of cars to move them with reasonable promptness to destination, the interstate commerce of the country is so delayed by this failure of the said railroads properly to perform their functions as common carriers as to constitute a menace to the continuance of individual and national prosperity ; and

Whereas, this evil has been steadily increasing for a series of years, notwithstanding the promises of betterment periodically made by the railroads and the certain annual increase in the demand for freight transportation facilities, due to the rapid growth in population, manufactures and domestic and foreign commerce, thus rendering improbable any remedy of evil by voluntary action of the railroads ; and

Whereas, the railroads, justly supported by the courts, have assessed, and, by their commanding position, have been able to collect penalties, termed demurrage charges, for what they deem unreasonable detention of cars for loading or unloading, but themselves recognize no reciprocal pecuniary obligation to their customers arising from inadequate car supply or unreasonably slow movement of cars, and in practice deny any liability therefor ; and

Whereas,the remedy to the the customers of the railroads under the present interstate commerce law is uncertain, depending upon construction of the law by the commission and by the courts, with the outcome to be determined only after a considerable period of time, during which the damage to commercial interests would continue, and hence a clear and explicit provision covering car service problems should be enacted by Congress, thus replacing the problematical by the positive ; now

Therefor, representing the lumber traffic of the United States, a traffic which has been and is being especially damaged by inadequate car service, and supported by heavy lumber shippers and lumber receivers in all parts of the country, I issue this call to carload shippers under commodity rates, and to receivers

TUG "GLADSTONE," OWNED BY PEDWELL & LEMCKE, LION'S HEAD, ONT.

of freight so shipped, and especially to associations whose members are of these classes, to meet in a national car demurrage convention in Chicago, Ill., on Friday, January 4, 1907, to discuss the present car service situation, its causes and remedies, and, if its members shall so decide, to devise and arrange for presentation to congress of an amendment to the interstate commerce law which shall provide in substance as follows :

That shippers and raceivers of carload freight shall pay to railroads without delay or recourse a fixed amount per car per day beyond a certain fixed time allowed for loading or unloading, such amount and time to be determined by the Interstate Commerc e Commis sion.

That reciprocally, failure by a railroad to place cars for loading within a reasonable, fixed time after demand for cars shall be made by prospective shippers shall subject such railroad to a like charge or penalty ;

That, failing to deliver a car at destination within a reasonable time, the railroad collecting the freight charge shall pay to the consignee or party holding bill of lading such amount per car per day of delay as the Interstate Commerce Commission shall decide to be just and equitable ; such payment to be automatically collectable, perhaps by having stamped on the receipt or bill of lading given by the railroad the date of delivery of car to the railroad, and the mileage to destination, the consignee having the right and power to make payment in full of freight bill by tendering the amount of the bill, less the penalty for delay shown to have accrued ;

Or to take such other action, or to recommend such other measures, as the members of the convention shall in their assembled wisdom decide to be equitable, practicable and wise, having due regard to the rights of the railroads or other common carriers engaged in interstate commerce as well as to the interests they represent.

This call is extended not only to lumbermen and organizations of lumbermen but to all who appreciate the seriousness of the present situation and wish to secure a just and reasonable remedy.

J. E. DEFEBAUGH,
Editor American Lumberman.

THE
Canada Lumberman
AND WOOD-WORKER

Monthly and Weekly Editions—One Dollar Per Year

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ADVERTISING RATES ON APPLICATION.

THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in every part of Canada in the lumber, wood-working and allied industries. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication in the WEEKLY LUMBERMAN the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN AND WOOD-WORKER is undoubtedly the most direct and profitable advertising medium. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

THE DEAL TRADE DISAPPEARING.

The export of pine deals from Canada to Great Britain is no longer the important branch of the lumber industry which it once was. In recent years there has been a steady decline in the quantity of timber so manufactured, and British importers are finding it difficult to obtain their requirements. Canadian manufacturers are at last recognizing the folly of cutting lumber into such sizes as shall restrict its sale to one market only, and thus make them entirely dependent upon that market. The standard 3x9 and 3x11 inch deal, in earlier years constituting a large percentage of the Ottawa Valley product, is not very saleable outside of the Mother Country, but the well known conservatism of the British people has kept it in the foreground there while the judgment of manufacturers and shippers was against it.

Mr. J. R. Booth, the greatest lumberman Canada has ever known, still manufactures deals. Were he to announce his intention to abandon this time-honored custom, as some other manufacturers have done, we believe it would be the death knell of the deal trade. Sooner or later this will happen, and our advice to British importers is to heed the warning which has been given and prepare to utilize lumber as it is commonly manufactured in Canada, as boards, or as it is sometimes called, sidings. The United States is taking large quantities of Canadian lumber, while the domestic market is also expanding rapidly. Competition in the buying is keen, and it behooves the Britishers to cast aside their conservatism if they are to retain their connection with Canadian manufacturers.

BUSINESS METHODS.

There is no gainsaying the fact that the best results accrue to business men through the pursuance of a policy strictly in accordance with the Golden Rule. This fact is recognized by lumbermen, and in their dealings with one another is to be found as much honesty and straightforwardness as in any other branch of industry. The very nature of the lumber business is calculated to make a man take a broad, unselfish view of things in general. Yet a scrutiny of trade ethics, as practised from day to day, reveals some methods which, to say the least, are not businesslike, and which should be discouraged by all persons having the best interests of the industry at heart. Some of these unfair methods, we believe, cannot be attributed to malice, but are rather the result of an almost unconscious indifference to the true principles of honesty.

The particulars of a case recently related to the CANADA LUMBERMAN will illustrate one kind of dishonesty which is practised to some extent. As is well known, the price of logs has been steadily advancing in British Columbia for many months—and we might here remark that abnormal conditions usually facilitate sharp practices. A logger having a quantity of logs for sale called at one of the large mills and quoted a price to the manager, who accepted his offer, and an agreement was made for delivery at a stated time. The logs, however, were not forthcoming, and an enquiry brought a promise from the logger that he would make early delivery. After a further lapse of two or three weeks, and his stock of logs becoming nearly exhausted, the mill man undertook an investigation and learned that the logger had afterwards received prices from several other mills, to one of which the logs had been sold and delivered. The original buyer of the logs could, of course, have recourse to the courts for damages, but this is not usually a profitable course to pursue. This logger's dishonesty was the result of a lack of what is sometimes called "backbone." We do not think that he was desirous of defrauding the mill man, but he lacked the courage to tell him that he proposed getting quotations from other mills and would sell to the highest bidder. When an agreement is entered into, whether verbally or in writing, it should at all times be strictly honored. Be frank in business matters.

The duty of fixing a price for lumber should devolve upon the seller. Failure to do this has been the cause of recent complaints, and certainly with good reason. To cite a concrete instance: A manufacturer advertised some lath for sale and a certain dealer asked for quotations, with a view to buying. Instead of receiving a quotation from the manufacturer, the dealer was asked to make an offer for the stock. This is not good business. The person who advertises a commodity of any kind for sale should be prepared to name his price, and apart from any obligation of this nature, letter-writing means delay, which in the present condition of the market is regarded unfavorably. Be specific in business matters.

The comparative scarcity of white pine and hemlock has tempted shippers to include stock below grade, knowing that the consignee would hesitate to refuse the lumber owing to the uncertainty of getting his requirements elsewhere. This is taking an unfair advantage of the buyer. Whatever the conditions, do not sell one grade and deliver another. The supply of lumber may some day become larger in relation to the demand, and when the tables are turned the dealer or consumer will buy from the manufacturer who always supplied lumber up to grade. Be conscientious in business matters.

The practice of "stealing" customers, we are glad to say, does not exist in the lumber business to the extent that it once did, but occasionally a manufacturer is reported to have resorted to this unjust method of securing increased profits. The dealer deserves fair treatment, and it is unbecoming of the manufacturer to endeavor to usurp his trade by offering to supply his customers direct. Be honorable in business matters.

TRAVELLERS' TAX TO BE REPEALED.

The act on the statute books of the Province of Quebec which imposes a tax of one hundred dollars on non-resident commercial travellers doing business in the province, received much adverse criticism, being regarded as likely to disturb the harmonious commercial relations existing between the provinces of the Dominion, as well as foreign countries. The unsound principle of the law was very generally admitted. The business world will learn with satisfaction, therefore, that the law is soon to be repealed, an announcement to this effect having been made by the Premier, Honorable Lomer Gouin, at the annual banquet of the Dominion Commercial Travellers' Association in Montreal a few days ago. The approaching session will very deservedly terminate its existence, and to the Government will then be due some praise for their promptness in rectifying a piece of mistaken legislation.

CALCULATING BOARD MEASURE MENTALLY.

The method of calculating board measure used for many years around the sawmill and in making out bills of lumber for buildings and other structures, is described by a writer in The Tradesman as follows: First find the amount in 1 lineal foot of the board or stick of lumber by multiplying the width by the thickness, and the product will be in inches. Reduce the product to feet and fractions of a foot, then multiply this product by the length of the stick, and you will have the amount of lumber in the stick. For example: If the stick be 2x4 and 14 ft. long, in 1 lineal foot there are 8 in., which is two-thirds of a foot, and in the whole length there are 20-3, which is 6 2-3 ft.; or, if the stick be 4x5 ft. long, there are 20 in. in 1 lineal foot, which is 1 2-3 ft., and in the whole length there are

23 1-3 ft., and so on for all sizes and lengths. These fractions may look formidable at first, but with a little practice, first with pencil and paper until the mind becomes trained a little to the method, you will find that you can tell in a minute the amount of lumber in a stick or board of any given dimensions and length, and then it is an easy matter to find out how many pieces of a given size and length it will take to make the number of feet required to fill the bill for that size and length.

The advantage in this method of calculating board measure is that the numbers to be multiplied and divided are kept small enough to be handled mentally; whereas, by the ordinary method, the numbers become so large that the mind cannot handle them without a very great effort, and one is forced to use pencil and paper to obviate the mistakes which are sure to occur.

HARDWOOD LOGGING BY STEAM.*

By H. M. Crawford.

A number of years ago, I am told, a Michigan lumberman first conceived the idea of handling logs from the stump by steam power. He believed in that way better results could be obtained than by means of the method then employed of using horses or oxen for pulling logs to loading ground and loading with animals.

After more or less experimenting with varying degrees of failure and partial success only, the plan was practically abandoned in Michigan and for a number of years thereafter, while the ox soon gave way to the more lively horse, animal power was practically the only power used in this state in moving logs from stump to loading point.

Year after year rolled around with practically no change in general methods of logging as regards power employed in getting the logs to transportation point.

During these years, however, logging railroads were introduced, proving in a great majority of cases popular, and increasing rapidly both in number and mileage until, at the present day, as you doubtless all know, it is in a great majority of cases unquestionably the most desirable way of moving logs.

Some five or six years ago an active effort was made to introduce steam loading machines in Michigan, which after some setbacks proved successful, and to-day a large proportion, at least of the larger operators in Michigan, consider a steam loading machine as necessary to their logging equipment as anything they have.

A few steam skidding plants have been in practical use for several years in this state, but as far as my observations go, they have been used by smaller operators only. Steam skidding has been for a number of years regarded by the larger lumbermen of Michigan as impossible from a practical point of view —admitted to be practical for various other lumber sections, but impractical for Michigan.

Meanwhile in other lumber sections where the physical and climatic conditions were less favorable, or rather more unfavorable, to animal power logging than they were in Michigan, news had traveled of the Michigan steam skidder, and in the course of a few years from those so-called failures of logging by steam in Michigan were developed several types of machines, which not only revolutionized logging methods in certain sections, but also made available several valuable woods, which otherwise would probably never have been prominently on the market, at least for this generation, on account of the excessive cost of getting out the logs by animal power.

These developments in other sections just referred to soon proved practical two general methods of skidding—the trolley system and the ground or drag system. These two systems are to-day the recognized ways of skidding logs, and with more or less special features brought out by different manufacturers are the ones universally used.

You gentlemen are all doubtless well aware of general methods employed in these two systems of steam skidding, making a description of them unnecessary.

Taking up the two systems separately, I call your attention to, first, the trolley system.

Starting from, as it did originally, a small light outfit with engines of 15 to 20 horsepower, heavier machinery has been gradually employed until now trolley system machines with engines developing as high as 100 horsepower are not uncommon; ones that handle, from a distance of 1,000 to 1,200 feet, several logs at one time: a single load or draw 2,500 feet being, while possibly not often accomplished, made at times, and could be made often were timber located so that a quantity could be readily "tongued" at one time.

The advantages of the trolley system as used in recent years are, first, its successful adaptability, in very rough, broken country, where stony ground, deep ravines and tangled underbrush and windfalls interfere very little if any with operation of a machine. Second, its adaptability in very wet, swampy country. Third, its operation, requiring no animal power whatever, all parts of work not done by machine itself being done by men employed on machine. This is so universally so that the trolley machine that has use for any animals is now very rare.

These three advantages would seem to make this system the ideal one for all conditions, and for a number of years it was generally believed that it was the only successful system that could be used in a steam skidder, no matter what the conditions of the operation were. Developments of the last few years, however, have shown that, while under certain conditions the trolley system is unquestionably the proper one, a great majority of conditions can be handled in a better way. So with this brief statement of the trolley system I will pass to the second or ground system.

[illegible] have been unsuccessful, so far at least, in learning who the originator of this system was, and have about come to the conclusion that like the famous "Topsy," it just "growed."

It stands to-day, however, the most used method of steam skidding, and is now being used successfully in places where even a short time ago no one, even those best posted on the subject, would have had the temerity to try or even recommend any other system than the trolley, the last three years particularly having shown very rapid advances in its development and use, more, probably, than in any previous ten years.

Compared with the trolley system, its advantages are found to be as follows: First, adaptability to thinly timbered land. Second, simplicity of equipment and consequent ease of operation. Third, ease of change or movement from one point or "set" to another. Fourth, the absence of necessity for those skilled men called "riggers," without which a trolley machine accomplishes little.

Heretofore ground system skidders have largely been used with horse or mule rehaul, viz., when a draw of log or logs is made, the line is pulled back by horse or mule to next log desired, the horse following load in and then dragging it back.

This method of rehauling empty line limits: First, size of line used; second, radius of action.

It has been shown that a good-sized horse can handle only about 900 feet of ⅝-inch line, and a proportionate length of larger line and even then can stand only about five hours per day of such work, while a machine can be operated continuously.

Various power rehaul systems for getting line back from machine to tree have been employed, so far used but infrequently except in places where it is impossible on account of swampy ground to get line back by animal power.

There is unquestionably, however, a strong probability that before even the present year is gone there will be in operation powerful machines operating under the drag system and pulling timber in quantities from a much longer distance than now generally thought practical: where line will be rapidly rehauled by power and where operation will be conducted entirely without the use of animals.

Referring directly to the subject of my paper, "Hardwood Logging by Steam," I believe that in a great majority of cases a properly designed and built steam skidding machine will prove invaluable to the hardwood operator of any size, not only in Michigan, but also in hardwood sections of other states; that the steam operated machine has now been developed to the point where competent management will prove that fact, and that the time is not far distant when their use even in our own conservative Michigan will be more universal than the steam loader is to-day.

Looking ahead a short time (probably a shorter time than most of you would grant) I can picture a new kind of logging camp—a logging camp on wheels. For with the animal eliminated from the logging proposition, no barns, large store houses, teamsters and hostlers will be required, and with the number required to man a certain sized operation greatly reduced, what will prevent having a logging camp on wheels—moved each time the skidder is moved, and keeping men always right at the scene of action, and the employment also of, perhaps, a different class of men, all of whom will be working within such a small radius from the machine or central point that each man will be under the eye of the foreman, with his part of the work, allotted in advance, to keep up.

*Paper read before the Michigan Hardwood Association.

THE CARE OF BELTS

By C. J. Morrison.

One great item of expense in every machine shop receives, as a rule, very little attention, and that attention by an unskilled laborer. This item is belting. The expense comes not only from the outlay for belting and supplies, but also from the delays caused by failure. In many shops it is a common sight to see high-priced machinists standing idle waiting for a belt to be repaired. There is probably no belt repair room and no one who really knows how to care for a belt. This is an expensive mistake.

BELT ROOM.

In a shop of any considerable size, there should be a regular belt room, fitted up with a complete outfit for repairing belts. This room should be about 10 x 35 feet, centrally located, well lighted, and locked at all times so that the belting will not be stolen. The room should be provided with facilties for heating glue and a rack for storing the belting. The tools should consist of a 100-foot steel tape, a belt trimmer, a smoothing plane with a 1⅝-inch blade, pliers, clamps, punches, hammer, awl, three straight edges, a tank for belt dressing, a heavy letter press, and tools for making whatever kinds of lace are used. There are many kinds of laces, but it is not within the province of this article to say which is best, although tests and actual service have proved one kind to be far ahead of all the others.

MAINTENANCE COST.

Belts should be maintained at a total cost, including labor, supplies and new belting, of between 14 and 25 per cent. a year of the inventoried value of the belting when new. In many shops the cost is over 100 per cent. The belt failures per month should not be more than three to every 100 belts. No main-drive belt should ever be allowed to fail, and no delay of over 10 minutes due to any failure should be tolerated. These results cannot be obtained by haphazard methods. In a shop running 800 or more belts there should be a regular foreman to keep the records and direct the work. This foreman can also take charge of the oiling and abrasive wheels. In a smaller shop the foreman would also be expected to work. No one should be allowed to draw any belting from the storehouse except the belt foreman. A record of every belt should be kept, such as is shown in the accompanying figure. All possible repairs should be made outside of working hours. The following simple rules cover about all there is in the care of belts.

CEMENT SPLICES.

In making the common splice, the first thing to be noted is to see that the pieces put together are about the same grade, width and thickness, and that the splices lie in the same direction as the same belt. Splices should be made of the length given in the table:

Width of Belt.	Length of Splice
1 in.	5 in.
2 in.	5 in.
3 in.	6 in.
4 in.	6 in.
5 in.	7 in.
6 in.	8 in.
7 in.	8 in.
8 in.	9 in.
9 in. to 18 in.	Same length as width.
Over 18 in.	18 in.

They should be worked down to a perfectly smooth even surface, square with the edge of the belt both at the point and back.

Care should be taken to see that the splice is no thicker than the rest of the belt. If the splice isthicker the belt will not run even. Square both ends of the splice from the same edge of the belt. Work on a perfectly smooth flat surface and, after dressing the ends for the splice, place them on a board 1 inch longer and 0.5 inch wider than the splice Place the edges from which the splices are squared in a perfectly straight line. Take the belt to a board just back of the splice.

Open the splice and spread on hot glue, place another board on top of the splice and clamp tightly with hand clamps or in a press, such as an old letter press. If a press is used, 10 minutes is long enough to keep pressure on the belt, but if hand clamps are used they must be left on for 3 or 4 hours. In either case, the belt should not be put under tension for at least 5 hours after glueing. Paper placed between the boards and the belt will prevent the belt from becoming glued to the boards.

Greasy belts should be cleaned with gasoline before attempting to cement them. Any grease in belts or glue is likely to cause the splice to fail. No rivets, wire, pegs or any other fastenings aside from cement should be used in splicing belts. Ordinary furniture or patternmaker's glue is satisfactory for belting.

TENSION AND THICKNESS OF BELTS.

Belts should have a tension when at rest of about 100 pounds per inch of width of good double belting. If not practicable to measure the tension on the belt, make the cut length 1 inch per 100 feet less than the tape-measured length over the pulleys. A steel tape should be used. Great care should be used to prevent the running of too tight belts and consequent burning of bearings.

Double belts should not be run on pulleys less than 6 inches in diameter, nor triple belts on pulleys less than 20 inches in diameter. Belts should sag onto pulleys and not away from them. Very short drives (belts under 20 feet long) should be avoided. Whenever possible, run up-and-down belts on a slant so that the belt will sag onto the pulleys.

ENDLESS BELTS.

All machines furnished with any means of taking up the stretch should have endless belts. Large over-head drive belts, over 6 inches wide, should be made endless as soon as the stretch is taken out. It is not advisable to make new belts endless at installation on account of the stretching. Wood-working machines having belts which do not require too frequent tightening will run better with endless than with laced belts. Side and bottom head belts on planers, matchers, etc., should be run endless.

CLEANING AND OILING.

Belts which have become too greasy and dirty should be cleaned with gasoline, then scraped, and wiped with waste. In dry, dusty places it is well to brush them occasionally with a broom or stiff brush.

No rosin or belt dope should be used except fish oil and tallow mixed in equal parts. Apply hot with a brush when the belt is running or dip the belt in the dope tank, then dry and wipe off any grease which may have hardened on the belt. If applied while running, care should be taken not to get too much on the belt, or it will cause it to slip.

No mineral oil should be allowed to come in contact with belts. New belts should be treated with fish oil and tallow before using, and any belt which becomes dry, hard, and glossy in service should have an application of the dressing. This is especially true of belts in blacksmith shops. The oil will check to some extent the evil effects of the smoke, sulphur gases and dirt, and the life of the belt will thereby be lengthened.

OPERATION OF BELTS.

In the successful operation of belts it is essential that the pulleys and shafting be properly lined and in good repair. It is bad practice to throw a pulley out of line to favor a bad belt. Belts should be run with the hair side to the face of the pulleys. Run belts so that the outside point of splice trails. This will

BELT RECORD CARD

Width : Thickness : Length :			Shop : Machine : Position :
Requisition issued : Requisition filled :		Purchased from : Cost :	Scrapped : Scrap Value :
Max. Speed :			
Max. Power :		INTERRUPTIONS	REMARKS
Max. Tension :			
Splices :			
DATES	MAINTENANCE	DATES CAUSE	
	Put on by		
	Tightened to lbs. tension		
	" "		
	" "		
	" "		

avoid opening the splices by the action of the air. Belts should never be run twisted or cross-stepped on cones.

Keep pulleys clean and avoid having mineral oil or grease in contact with the belts. If hard grease or dirt is allowed to pile up in corners of cones so as to form a fillet, the belt will be very likely to climb, turn over or twist. In turning faces of cones, a clearance should be cut in the corners.

A belt should never be dampened in order to open a splice. An awl should be used, gradually scratching or ripping the splice apart.—American Machinist.

LUMBERING IN JAPAN.

Mr. C. L. Seitz, managing director of the China Import and Export Lumber Company, Limited, of Shanghai, China, has furnished some interesting facts regarding oriental lumbering.

"Japan," says Mr. Seitz, "is the great basis of supply for lumber for China. The Mitsui Bussan Kaisha is the largest lumber firm in Japan, with headquarters in Tokio. This company owns and operates extensive tracts of timber land in Hokkaido, Nippon, and Sakhalien Islands, and practically controls the Japanese lumber business. The pine of Japan is similar in character to that of the eastern spruce of the United States. It is a light cream in color, and practically free from sap. You can cut a tree right through the centre and it is difficult to tell which part is heartwood and which is sap. The annual rings show but slightly. When dressed it takes a lovely satin finish, and is a very pretty and useful wood. The only drawback is that it is soft. A large number of beautifully figured woods are found in the forests in Japan, and it will not be long before they will become known and sold on the markets of America and Europe.

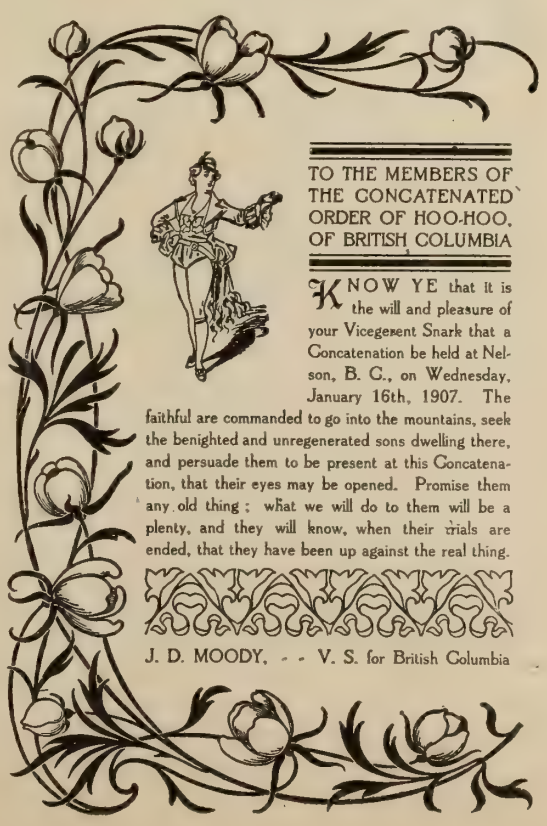
"The work as carried on in the forests of Japan now is crude, and no proper method of selection and grading is observed, with the result that much of the most valuable timber cut is converted into railroad ties, regardless of its true value. In Japan logging machinery is practically unknown. Woods work is carried on in a very primitive manner. The investment in equipment is, to say the least, not very heavy. In the early fall a large number of Japanese coolies are engaged and sent into the forest. The coolies are accompanied by their wives and children. The operating company furnishes them with rice, fish, clothing, and other necessities for the season. The men fell the trees and the women and children hew them into squares with axes; then they are dragged to the rivers and creeks, where they are left for the spring freshets to carry them to the larger streams and thence to the mills.

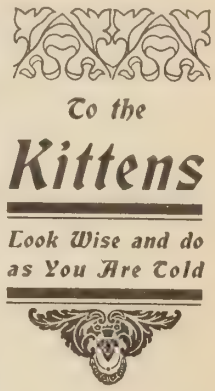
"The logs are cut in 14 ft., 16 ft., and 18 ft. lengths. Each coolie puts a stamp on the logs he cuts before they are rolled into the gorges. When the accumulated snows of the winter melt they are floated to the mills, where the winter's work of the individual logger is checked up and credit is given him. If the man has an energetic wife and a large family he will make one yen a day, which is equal to about 50 cents, gold. From this is deducted the cost of the food and clothing supplied him at the beginning of the season's work."

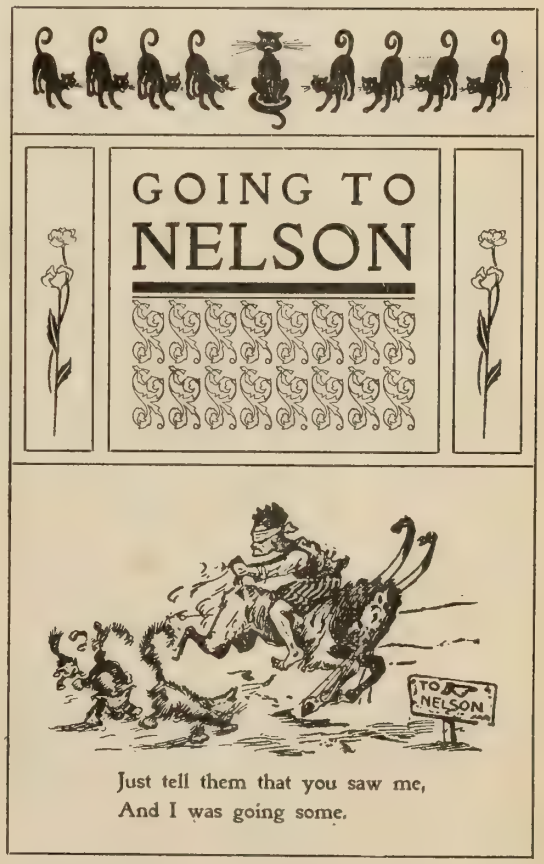
CONCATENATION AT NELSON, B. C.

A Hoo-Hoo Concatenation will be held at Nelson, B. C., on January 16th, 1907, and largely through the efforts of Mr. George P. Wells, Secretary of the Mountain Lumber Manufacturers' Association, it promises to be one of the largest meetings ever held on the Pacific Coast. The decorations for the occasion are being imported from New York, and the committee are making strenuous efforts to have this concatenation a howling success.

The original announcement as issued by the Vicegerent Snark is reproduced below.


TO THE MEMBERS OF THE CONCATENATED ORDER OF HOO-HOO, OF BRITISH COLUMBIA
KNOW YE that it is the will and pleasure of your Vicegerent Snark that a Concatenation be held at Nelson, B. C., on Wednesday, January 16th, 1907. The faithful are commanded to go into the mountains, seek the benighted and unregenerated sons dwelling there, and persuade them to be present at this Concatenation, that their eyes may be opened. Promise them any old thing; what we will do to them will be a plenty, and they will know, when their trials are ended, that they have been up against the real thing.
J. D. MOODY, - - V. S. for British Columbia


To the
Kittens
Look Wise and do as You Are Told
THERE are some real smooth things you have not yet seen. So keep your blinkers open and spread your side-flappers, that you may see and hear as they are revealed to you. : : : : Our wise men and a few others have been abroad, and have returned home with improved devices of pleasure and comfort for your entertainment: : : :



All good Hoo-Hoo are desired to get on the war path and be in Nelson by January 16th. Application has been made to the railroads and it is hoped to arrange for a fare and third from all points in British Columbia to Nelson.

PROPOSED EASTERN CONCATENATION.

Vicegerent Snark W. A. Hadley is desirous of having a concatenation in the Eastern district at some time which will meet the convenience of most of the brethren. An expression of opinion has been asked as to the time and place and it is probable that a decision will be reached within the next few days, when an announcement will be made in the Weekly Edition of the CANADA LUMBERMAN. Every member is asked to have a candidate in waiting for the event.

WESTERN CANADA

Western Offices of The Canada Lumberman,
615 Hastings Street, VANCOUVER, B. C.; 720-721 Union Bank Building, WINNIPEG, MAN.

500,000 FEET PER DAY.

Work on what promises to be within a short time one of the biggest sawmills on the Canadian Pacific Coast is about to be commenced on Graham Island, about 600 miles north of Vancouver City. A company of wealthy Eastern American capitalists have secured extensive timber limits on this Island, and arrangements are already under way towards the erection of the sawmill. A site has been secured on Masset Inlet about four miles from its mouth, consisting of 350 acres located on a bay, which includes Ship Island, the whole forming an ideal location for log storage and harbor facilities. A portable mill will be installed at once and will be cutting early this month, supplying lumber for the erection of the permanent mill. According to agreement, this big sawmill must be in operation within a year, with a cutting capacity of 250,000 per day, and as soon as the export trade warrants it, the capacity of the mill to be doubled, thus attaining an output of half a million feet per day. Two steamers have been arranged for already, and as soon as the mill is in operation first-grade lumber, which is the only kind that finds a market in South America, will be shipped to that country. For a while a market for the second grade lumber will be found in the rapidly developing mining camps and small towns in Northern British Columbia and Alaska, the company themselves being interested in mines in the latter country. Later on, with the development of Prince Rupert, which is situated directly to the East of Masset Inlet, a market there will be found for all the lumber that is not exported.

The new company have taken over practically all the limits owned by Messrs. Martin & Shannon on the Queen Charlotte Islands, which includes over fifteen hundred million feet of choice standing timber; 60 per cent. of this is spruce, 20 per cent. red cedar, 10 per cent. yellow cedar, and 10 per cent. Alaska pine, all of which is located on the waterfront but so perfectly sheltered that it will be possible to tie up a boom anywhere along the shore. The entire area of standing timber is probably about 50,000 acres. Alaska pine is a particularly fine grade of wood, being perfectly white in color, while the yellow cedar is also a superior quality, especially adapted for mouldings, turnings and interior finish, taking any stain very readily. In addition to the timber above mentioned, there are hundreds of thousands of telegraph poles on the limits, which will find a ready market in Mexico as soon as their export is permitted, and it is understeod on good authority that the Provincial Government contemplates putting through a measure to permit this, as there is no market in Canada for the poles and they are a finished product as soon as cut down and barked. These poles would otherwise be destroyed by fire, as they are not large enough to manufacture into lumber.

Members of the new company are interested in mills in Michigan and other Eastern points, where the timber is practically all cut out, and it is their intention to bring out the workmen and their families who were employed in the Eastern mills, and locate them on the Island, thereby ensuring a supply of competent labor for the new mill. It is their intention to exclude so far as possible all Oriental labor, but where possible and feasible they may employ some of the Indians on the Queen Charlotte Islands. Many of these Indians are the product of mission schools and so long as they remain steady are generally an excellent class of labor.

The plans of the company include the maintenance of schools and churches and all possible provision will be made for the comfort and happiness of the workmen and their families, it being the company's intention to build up a a permanent town on Graham Island.

One important scheme which this new corporation hopes to consummate is an arrangement with the Government prohibiting the issuing of liquor licenses on the Island. Not the least important of this new enterprise will be the extent to which it will open up Graham Island, where there are many thousands of acres of excellent farming lands, all the timbered lands being along the water's edge, while the interior of the Island, which in itself is good, high and level, only requires proper drainage to render it all A1 for agricultural purposes. The new mill will afford employment to settlers who homestead with small capital, and by all signs the advent of the new company will be the beginning of the development of the great wealth which exists in the Northern Island of the Queen Charlotte group. The climate itself in superb, being similar to that of Victoria, B. C., the warm Japanese currents and the sea breezes keeping a normal temperature throughout the year.

INTERESTING TALK ON LUMBER MATTERS.

Mr. Otta Lachmund, of the Lamb-Watson Lumber Company, of Minneapolis, who recently purchased the interests of the Arrowhead Lumber Company and the Kamloops Lumber Company, was interviewed on lumber matters when in British Columbia last month.

"We are about to materially extend the business," said Mr. Lachmund, "and to that end have engaged the services of Mr. Wilkinson of Minneapolis, a man of the highest ability, who has probably had more experience in this direction and built more sawmills than any man in the world. He is engaged in looking over our plants and will make suggestions and undertake improvements, and when these have been carried into effect we reckon on being able to produce fifty million feet of lumber per annum. The estimated cost of these alterations and extensions will be something in the neighborhood of $100,000.

"The timber limits of the company are upon the Arrow lake and Columbia river in the one direction, and upon Shuswap lake and the Thompson river on the other, and contain some of the best timber in the province.

"The market for which we cater is that of the prairie provinces, Alberta, Saskatchewan and Manitoba.

"Lumber is getting very scarce just now," continued Mr. Lachmund, and the demand is brisk. Even here on this island there are orders for millions of feet offering which the millmen are unable to accept, for in addition to a scarcity of lumber, there is a scarcity of logs.

"There is, in my opinion, a great opportunity of development before this province in this as well as in other directions of industry, and the only obstacle in the way of such development is the scarcity of labor throughout British Columbia. It is a hard thing to say how this difficulty is to be overcome. As a principle we, as a company, are in favor of white labor. It is the most satisfactory in every way and the easiest to manage; but, if we cannot get it, we must be content to take what we can get. Consequently, in company with many others, we have in this emergency been glad to employ Hindus. We find them good, conscientious workers, but they cannot do the work of a white man. They are willing and industrious but what they lack is physical stamina. On the other hand, they are willing to work at a lower rate of wages than that demanded by the white labor. They are satisfied with $1.50 to $1.75 per diem as against $2.25 to $2.50 paid white men; thus the net result to the employer is about equalized. It has been urged in a section of the press that if employed at all they should be paid at the same rate as other workmen, but this contention on the face of it would be manifestly unfair to the employer, judged simply on the basis of results.

"Some of the mountain mills are employing Japs, and I am told that they have proved very satisfactory and very much superior to the Hindu not only as regards physical superiority, but also in intelligence and adaptability. The Hindu may be equally quick to learn but if so he has not the neccessary strength to execute

his ideas. He has, moreover, exclusive notions in regard to food, though I am not aware that this has proved any special detriment so far; and he certainly is a very quiet, polite and courteous person, satisfied and apparently contented with his lot, inclined and without any apparent tendency to create disturbances of any kind, as has been alleged against him. Speaking generally, I may say that for the money we pay them, the Hindus have done us good service. We ourselves have so far had no personal experience of the Japs, but they are described by those who have as apt, handy fellows and ready workers. The pay they receive is $1.75 to $2 per day.

"Such is the position of the labor market as we find it, and it is the same with others. We are all in the same boat and the complaint is general. It constitutes, as I have said, the main obstacle in the way of development, for there is plenty of capital, American and otherwise, only waiting the opportunity to come in.

Another American, Arthur Roger, has bought the milling plant at Enderby, one of the Kamloops Lumber Company's properties, with timber limits near Enderby. In our two plants we give employment to between 600 and 700 men. If we could do all we would like to do, we should employ at least 800 men. We have been sending men into the prairie country to engage labor and still we are seventy-five men short in the woods. One of the mills in that district has absolutely had to shut down for want of men to work it. All the mills that can do so are working at their utmost capacity and the lumber outlook for the coming spring is very fine; but it looks as if there would be considerable shortage of lumber because of the shortage of logs I have mentioned; and such being the case, I belive that the price of lumber will be still further advanced in the spring.

"There is an erroneous impression abroad that lumber prices are ruled by a ring or trust. Such is not the case. The price of lumber, both in Canada and the United States, is regulated by the simple effect of supply and demand, and nothing, as far as I can see, can bring about a reduction in the price of lumber except a crop failure on the prairies. This, by curtailing the purchasing power of the consumer, would limit the demand and the price would then fall. In the States a similar crisis occurred some time back. People said that lumber would never again be cheap, but a crop failure occurred in several successive years and prices fell forthwith."

ANOTHER SHINGLE MILL IN BRITISH COLUMBIA.

The Port Haney Lumber Company, Limited, of Port Haney, B.C., is the name of a company recently formed for the purpose of engaging in the shingle manufacturing business. The company's mill is located on Kanaka Creek just where it enters the Fraser, and about a mile above Port Haney. At present three of Messrs. Letson & Burpee's "Simplex" shingle machines have been installed and the mill is expected to be in operation early this month. The shingle bolts are cut about five miles up the creek and floated down to the mill, where they are manufactured into shingles and after passing through the dry kiln, are loaded onto barges and taken to Port Haney, where they are re-loaded into cars.

The company aims to do business throughout Canada, and also the States. For the American trade they are going to make a 24-in. shingle and purpose keeping one machine all the time on that size shingle. The cedar up the Kanaka Creek is claimed to be unsurpassed anywhere and will produce the highest grade shingle.

The personnel of the Port Haney Lumber Company is: President, Dr. Lachlan N. McKechnie; Secretary-Treasurer, E. E. Rand; General Manager, J. A. Gibson.

TWO B. C. MILLS CHANGE OWNERSHIP.

Two important sales of saw-mill properties took place in Vancouver last month. A deal for the controlling interest in the Pacific Coast Lumber Company, Limited, an extensive plant on Burrard Inlet in Vancouver city, has been practically closed, the purchasers being a local syndicate headed by Mayor Fred. Buscombe, of Vancouver. The purchase price is understood to be $750,000. The site alone is a very valuable one, being on the harbor front, adjoining the western extremity of the C. P. R. docks. The plant is entirely modern, being comparatively new and complete with up-to-date machinery.

The other sale is the transfer of the Canadian Pacific Lumber Company's plant at Port Moody, also on Burrard Inlet, about twelve miles from Vancouver. The purchasers of this plant are a syndicate composed of Messrs. Geo. McCormack, B. C. Irwin and Sir Chas. Hibbert Tupper, of Vancouver, and G. E. Corbold and C. J. Major, of New Westminster. Mr. McCormick, who was until this past fall general manager and part owner of the Kamloops Lumber Company, has since that time been general manager of the Pacific Coast Lumber Company at Vancouver. He will now assume the same office in his new purchase. The price paid for the Port Moody mill was about $300,000. The former owners of the Canadian Pacific Lumber Company were Messrs. T. W. Paterson, of Victoria, B. C.; T. F. Paterson, of Vancouver; Perry D. Roe and J. Abernethy, of Port Moody. These gentlemen were president, secretary, manager and superintendent respectively. Possession of both mills will be granted the new owners in about ten days.

HYMENEAL.

The marriage was solemnized in St. Paul's Episcopal Church, Vancouver, last month of Mr. R. H. H. Alexander, the eldest son of Mr. R. H. Alexander, general manager of the B.C. Mills, Timber & Trading Company, and Miss Isabel Cartwright, youngest daughter of the Rev. C. E. Cartwright of that city, and a sister of Mr. G. E. Cartwright, Divisional Engineer for the C.P.R., and a niece of Sir Richard Cartwright, Minister of Trade and Commerce. The Rev. H. J. Underhill conducted the ceremony, which was witnessed by a large number of friends of the contracting parties. Miss Gertrude Charleson was bridesmaid and Mr. Fred Alexander, brother of the groom, acted as best man. At the conclusion of the ceremony, Mrs. Cartwright held a reception at the family residence, 1511 Haro Street. Mr. and Mrs. Alexander are spending their honeymoon in the South and on their return they will reside in Vancouver.

BRITISH COLUMBIA LOG SCALING RULES.

In British Columbia the Government does the scaling. The cost is 5 cents per thousand feet, which is paid by the logger and the millman. It is learned from Mr. A. Haslam, Chief Scaler, that the revenue derived about pays the cost of maintaining the service. The logs are graded in accordance with the following rules.

BRITISH COLUMBIA GRADING RULES FOR FIR, HEMLOCK AND SPRUCE LOGS.

Adopted 23d August, 1906, at a joint meeting of representatives from the British Columbia Lumber and Shingle Manufacturers' Association and the British Columbia Loggers' Association and concurred in by the Government Supervisor of Scalers.

FLOORING.

Logs suitable for flooring; reasonably straight; not less than 20 feet long nor less than 30 inches in diameter; clean; free from such defects as would impair the value for clear lumber.

MERCHANTABLE.

Logs not less than 14 inches in diameter; sound; reasonably straight; free from rotten knots or bunch knots; the grain straight enough to ensure strength.

ROUGH.

Logs having visible defects such as crooks, bad knots or other defects that would impair the value and lower the grade of lumber below merchantable.

CULLS.

Logs which will not produce 50 per cent. of their contents in saleable lumber shall be classed as culls. In all cases the scaler has the right to use his own judgment.

EXCEPTIONS.

There are defects characteristic of timber in certain localities for which it is imposible to make rigid rules.

CEDAR LOGS.

These rules do not apply to cedar logs.

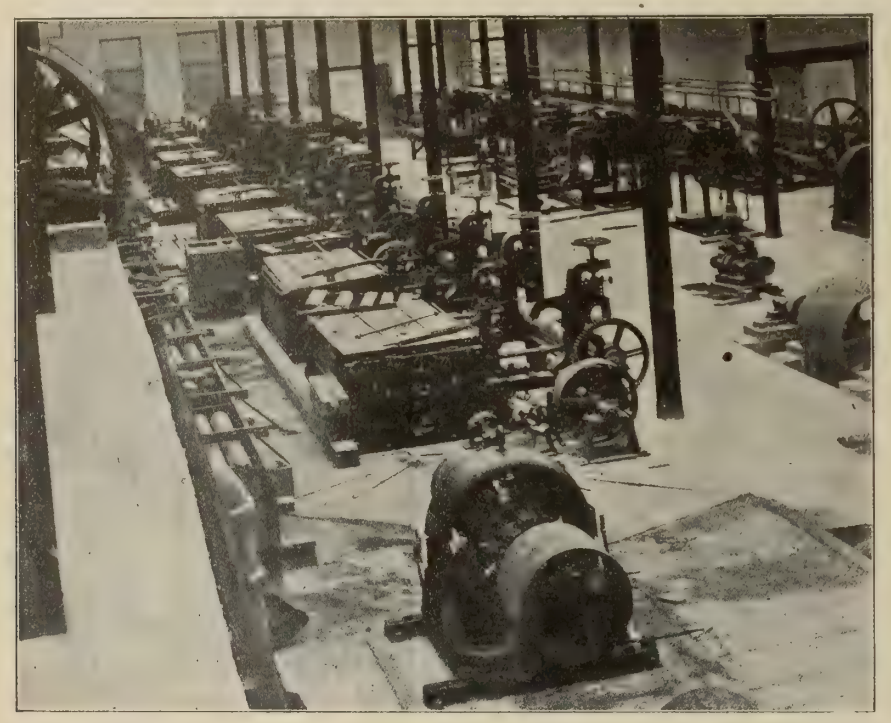
AN EXCELLENT PAPER.

The McCollom Lumber Company of Winnipeg write the CANADA LUMBERMAN as follows: "We take this opportunity of stating that we think you are publishing an excellent paper, and giving more than value for what you charge for it."

THE SPANISH RIVER PULP MILLS.

One of the most up-to-date pulp mills on the continent is that of the Spanish River Pulp and Paper Company, recently completed at Espanola, Ont. Its present capacity is 70 tons per day, which is shortly to be increased to 110 tons. All the pulp is shipped by way of Sault Ste. Marie to the United States. Power is derived from the falls of Spanish River, which have a drop of about 65 feet. The company has already developed some 10,000 horse-power out of probably 15,000 horse-power available; the plant, consisting of 5 10-foot steel penstocks, supplying the turbine with 2,000 horse-power each.

The mill is constructed of brick, concrete and steel of the most substantial character, and the whole equipment of the plant is designed with a view to economically handling and manufacturing a high grade of ground wood pulp, and reducing the cost of repairs to a minimum. Gravity is taken advantage of as far as practicable, and all the latest labor-saving devices have been installed.



WET ROOM OF THE SPANISH RIVER PULP AND PAPER COMPANY, ESPANALO, ONT.

The wood is conveyed direct from the booming ground by means of an endless chain to the barking room, which is equipped with twelve of the latest type of barkers. Passing through this room it descends to the grinders, which, twenty-four in number, are of the most modern construction, with a capacity of five tons each per 24 hours. The product of the grinders is conveyed by two centrifugal pumps to the centrifugal screens, which are of the most approved pattern, and after passing through these is handled by 16 diaphragm screens. The product is then conveyed by gravity to the wet machines, 16 in number, after which it is hydraulically pressed between 55 per cent. dry and 60 per cent. dry. The product is then baled, and conveyed to the shipping room for transportation.

The Smart-Turner Machine Company Limited Hamilton, are supplying the Georgian Bay Lumber Company, Waubaushene with one of their Duplex Outside packed plunger pumps with pot valves.

FOREST TELEPHONES.

The general impression of the purpose of the telephone appears to be in connection with its extensive installation in the cities in the whirl of concentration of active buisness affairs on a large scale and amid the lvxuries of affluence. While it is, indeed, true that the telephone abounds in greatest numbers in cities, yet the sphere of the individual usefulness of the instrument, says The Electrical Review, is not confined to great centres of population, nor measured by vast possessions. Indeed, its purpose is, relatively, the more useful where there is an absence of resources to command other methods of rapid communication.

During the last few years, the lumbering buisness has changed from a barbarism to a science, and the woodman does "spare that tree," if it is too small for the most advantageous use, and thus provides for the continuation of the same variety of growth, instead of ruthlessly hacking the forest to a desolation, to be followed by a different growth generally of less value.

Throughout the forest, from St. Johns to Vancouver, lumber camps belonging to the same interests are connected together and thence to the sawmills or wood pulp works at frontier towns, from which communication can be held even to the metropolis.

It was formerly the custom of each lumber interest to maintain a force of couriers, like the voyageurs of the Hudson Bay Company, and hardy men, with knapsack, would travel twenty-five miles a day through the wilderness, over rough forest paths. Now, the mill calls each camp in turn at stated hours, and receives reports and gives instructions to the foreman, and it is not necessary to dwell on the commercial advantages of maintaining such close touch between headquarters and outposts in any enterprise. Letters are read to men snowed in the forest fifty or a hundred miles away, and answers dictated by the lumbermen to a stenographer who transcribes them at the office and then mails them to their homes. The relative contentment among the men which is established by this frequent communication is highly advantageous to the working force, and, therefore, to their employers.

The applications of the telephone to the operations of logging are alike novel and useful. The lines are run upon forest trees along the banks of rivers and telephones which are contained in sheltering boxes are attached to trees and connected to the line.

The bete noir of logging is the collecting of the logs together at some narrow place in a turbulent stream, and piling upon each other in a "jam" to which contributions are made by every log floating down the river to this spot. The formation of a jam results from some obstacle, and generally occurs without warning, and it requires great labor, fraught with peril, to remove the logs from their constricted position. It is frequently necessary to use dynamite and much lumber is destroyed by such explosions.

With the use of the telephone, warning of the initial formation of a jam can be given by one of the men patrolling the banks, who telephones to the men up the river to stop the further flow of logs at calm places termed "trips," and it is an easy matter to break the small jam, for which further assistance can be had by summoning men from points lower down the stream. As soon as the small jam is removed, the men above are told through the telephone to release the logs hed at the "trip" and the stream of logs is resumed.

Under former conditions a larger number of men were employed, and when a jam was begun it was necessary to send messengers from one to three miles through the forest in various directions to direct the gangs to stop the flow of logs, and others to summon help who are down the stream to come up and break the jam, which had, meanwhile, time to amplify, and then after the jam had been broken second messengers must be sent up the stream to release the logs at the "trip."

By the promptness of telephonic communication, the rate of sending logs down the stream is increased by the avoidance of delays.

Beyond this, the use of the telephone renders log driving feasible on the smaller rapid rough streams where it was formerly out of the question. Timber dams, with large sluiceways controlled by gates, are built at suitable points and the men along river telephone to the men at the sluiceways to open or close the gates as the water may be needed.

In the Northwest, from Spokane to Columbia Pass, the trees grow from sixty to one hundred feet in height, and from ten to thirty-six inches in diameter, and without branches for thirty feet above the ground. As in all these forest systems, the wires are attached to the trees.

A lumberman at Hoquiam, Wash., was crippled for three years by an accident in the forest, and during this invalidism he directed his lumbering operations from his sickroom by means of telephones connected to his camps and logging booms on the Chelalis river, thereby conducting a buisness of $250,000 a year under physical conditions which, had it not been for the telephone, would have rendered him, in his helpless disablement, dependent upon other resources, instead of being a man of affairs.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

CAR OR CARGO LOTS.

1 inch No. 1 Pine cuts & better	$39 00	51 00	Hemlock, 1x4 to 8 in	17 00	18 00
1½ inch No. 1 cuts and better	54 00	56 00	2x4 to 8 in., 10 to 16 ft	18 00	20 00
2" No. 1 Cuts and Better	56 00	58 00	2x4 to 10 inch, 18 ft.	20 00	22 00
1½ in. No. 2 Pine cuts and better	45 00	47 00	Clear inch B.C. cedar, kiln dried		54 00
2" No. 2 Pine Cuts and Better	46 00	48 00	Clear inch B.C. cedar air dried boat lumber		57 00
1½ inch No. 3 Cuts and better	41 00	43 00	Douglas fir dimension timber, up to 32 feet		35 80
2" No. 3 Cuts and Better	44 00	46 00	Fir flooring, edge grain		44 00
1 in. Pine Dressing and better shorts	25 00	26 00	1½ in. No. 1 4 ft. Pine Lath	5 00	5 25
1x4, 6 and 8 common	21 00	22 00	1½ in. No. 2 4 ft. Lath	4 00	4 25
1 x 10 common	22 00	23 00	1½" No. 1 32" pine lath	2 50	2 75
1 x 12 common	24 00	25 00	1½" No. 1 4 ft. hemlock lath		4 00
2 x 10 common	24 00	25 00	XXXX Pine Shingles	3 00	3 25
2 and 3 x 12 common	25 00	26 00	XX Pine Shingles	2 25	2 30
1 x 10 inch box and common	23 00	25 00	X Pine Shingles		90
1" mill run sidings	24 00	25 00	XX Cedar Shingles B. C. Shingles	2 25	2 30
1 in. mill run	25 00	26 00	XXX 6 butts to 2 in.		3 25
1x10 and 12 mill culls	18 00	19 00	XXXX 6 to 23-16 in.		3 47
1 inch mill cull sidings	17 50	18 50	XXXXX 5 to 2 in.		3 80
1" dead cull sidings	14 00	15 00	XX No. 2, 6 to 2 in.. / XX " 6 to 23-16 in.		2 40
1½ inch Flooring	30 00	31 00	Red pine, clear and clear face	24 00	25 00
			Red pine, common 2"	16 00	19 00

HARDWOODS—PER M. FEET CAR LOTS.

Ash White, 1sts and 2nds, 1 to 2 in.	$33 00	35 00	Soft Elm, mill run	21 00	22 00
Ash, Black, 1sts and 2nds, 1 to 2 in.	30 00	32 00	Rock Elm, common and better, 1 in.	25 00	26 00
Ash, Black, mill run	23 00	24 00	Rock Elm, common and bet. 1½ to 2 in	28 00	29 00
Birch, common and better, 1 in.	24 00	25 00	Rock Elm, mill run	22 00	23 00
Birch, common and bet. 1½ to 3 in	26 00	27 00	Soft Maple common and better, 1 in	22 00	23 00
Birch, mill run	20 00	21 00	Maple common and better, 1½ to 3 in	24 00	26 00
Basswood, common and better, 1 in.	24 00	25 00	Maple, mill run	20 00	21 00
Basswood, common and bet., 1½ to 2 in	25 00	27 00	Oak, red, plain, 1sts and 2nds	46 00	50 00
Basswood, mill run	21 00	22 00	Oak, white, plain, 1sts and 2nds	44 00	46 00
Soft Elm common and better, 1 in.	24 00	25 00	Oak, quartered, 1sts and 2nds	70 00	75 00
Soft Elm, common and bet. 1½ to 2 in	27 00	28 00	Hickory, 1sts and 2nds	36 00	38 00

OTTAWA, ONT.

MANUFACTURERS' PRICES.

Pine, good sidings: 1 in x 7 in. and up	$40 00	44 00	1 x 10 No. 1 barn	26 00	28 00
1¼ in and 1½ in. x 8 in. and up	48 00	56 00	1 x 10 No. 2 "	21 00	22 00
2 in x 7 in and up	52 00	56 00	1 x 8 & 9 No. 1 barn	21 00	24 00
No 2 cuts 2x8" & up	34 00	36 00	1 x 8 & 9 No 2 "	18 00	20 00
Pine good strips: 1 in.	35 00	38 00	Pine Shorts 6' to 11' x 10"	17 00	18 00
1¼ in. and 1½ in.	36 00	40 00	Pine mill culls	16 00	18 00
2 in.	40 00	45 00	Pine O. culls	11 00	13 50
Pine good shorts: 1" x 7" and up	37 00	40 00	Spruce, 1"x4" & up	15 00	16 00
1 in.	28 00	30 00	Spruce, 1" stocks, 7, 8, 9 and 10"	16 50	19 50
1¼ in. and 1½ in.	42 00	45 00	Spruce, 1" clear (fine dressing and B		24 00
2 in.	42 00	45 00	Hemlock		14 00
7" to 9 A Sidings		17 00	Basswood	18 00	21 00
Pine, No. 1 dressing siding	23 00	27 00	Birch	18 00	20 00
Pine, No. 1 dressing strips	20 00	28 00	Lath, per M: No. 1 white pine 1½"	4 00	4 50
Pine No. 1 dressing shorts	18 00	22 00	No. 2 white pine	3 50	3 75
Pine, 10 s. c and better 12' to 16'	23 00	25 00	Spruce, mill run	3 00	3 50
Pine, 8 s. c. and better 12' to 16'	21 00	23 00	Red Pine, mill run	3 00	3 50
Pine, 7 up s. c. sidings	23 00	25 00	Pine Shingles: XXXX, 18 inch	3 25	3 75
Pine s. c. strips	20 00	21 00	Clear Butt, 18 inch	2 75	3 25
Pine, s.c. shorts	17 00	18 50	XX 18 inch	1 70	2 00
Pine, box boards	18 00	20 00	White Cedar Shingles: XXXX, 18 inch	3 75	4 00
			Clear Butt, 18 inch	3 00	3 25
			XX, 18 inch	1 70	2 00

QUEBEC, QUE.

WHITE PINE—IN THE RAFT

	cts.	
Square white pine, measured off, 30 to 40 feet average	35	50
First class Ottawa waney, 18 inch average, according to lineal	62	68
" " " 19 to 20 inch average " "	65	75

RED PINE—IN THE RAFT.

Measured off, according to average and quality	30	40
h ipping order " " "	35	40

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	55	60

ELM.

By the dram, according to average and quality 40 to 45 feet	70	74
" " " " 30 to 35 fe t	55	60

ASH.

10 inches and up, according to average and quality	25	30
Average 16 inch	35	45

BIRCH.

14 Inch	18	20
16 "	26	29
17 " "	30	32
18 " "	34	38

SARNIA, ONT.

UPPERS.

1 in., 8" and up wide	$80 00
1¼, 1½ and 2" "	80 00
2½ and 3" "	88 00
4" "	96 00

SELECTS.

1 in., 8" and up wide	70 00
1¼, 1½ and 2" "	70 00
2½ and 3" "	83 00
4" "	91 00

FINE, COM. AND BETTER.

1 x 6 and 8"	45 00
1 in., 8" and up wide	52 00
1¼ and 1½" "	55 00
2" "	56 00

FINE COMMON.

2½, 3 and 4"	80 00 88 00

NO. 1 CUTS.

1 in., 8" and up wide	38 00
1¼ in. "	48 00
1½ in. "	48 00
2" "	50 00
2½ and 3" "	62 00
4" "	62 00

NO. 2 CUTS.

1 in., 6" and up wide	21 00
1¼ "	35 00
1¼"	35 00
2" "	38 00
2½, 3 and 4" "	49 00

NO. 3 CUTS.

1 in., 6" and up wide	19 00
1¼ and 1½" "	24 00
2" "	25 00
2½, 3 and 4" "	30 00

MILL RUN

1" x 4"	24 00
1" x 5"	25 00
1" x 6 and 8"	25 00
1" x 10"	26 00
1" x 12"	28 00
1" x 13 and up	29 00
1¼ x 4 and 5"	$25 00

NO. 1 BARN.

1 in.	$27 00 to $35 00
1¼, 1½ and 2"	33 00
2½ and 3"	39 00
4"	42 00

NO. 2 BARN.

1 in.	27 00 to 31 00
1¼, 1½, and 2"	29 00 to 31 00
2½ and 3"	34 00

NO. 3 BARN.

1 in.	24 00 to 27 00
1¼, 1½ and 2"	24 00 to 27 00
3"	30 00

BOX.

No. 1, 1", 1¼, 1½, 2	21 00 to 23 00
No. 1 mill culls, 1, 1¼, 1½, 2"	18 00 to 20 00

MILL CULLS.

Mill Run Culls 1"	17 00
1", 1¼, 1½ and 2"	18 00
No. 2, " " "	15 00

LATH.

No. 1, 32" "	2 00
No. 2, 48" "	4 25
No. 1, 48" pine	4 75

BUFFALO AND TONAWANDA, N.Y.

WHITE PINE.

(Wholesale selling price.)

Uppers, 1, 1¼, 1½ and 2 in.	$82 00	1¼ in.	40 00
2½ and 3 in.	90 00	2 in	42 00
4 in.	95 00	Shelving, No. 1, 13 in. and up, 1 in.	45 00
Selects 1 in.	73 00	No. 1 Mold st'ps 1 to 2 in	5 00
1¼ to 2 in.	72 00	No. 2 Moulding Strips, 1 to 2 in.	42 00
2½ and 3 in.	85 00	Barn, No. 1, 12 in.	37 00
4 in.	90 00	No. 2, 10 in.	32 00
Fine common, 1 in.	57 00	No. 2, 12 in.	33 00
1¼ and 1½ in.	59 00	No. 3, 10 in.	27 00
2 in	61 00	No. 3, 12 in.	28 00
3 in.	80 00	Box, 1x4	21 00
4 in	85 00	1 x 6 & up	24 00
Cut'g up, No. 1, 1 in.	45 00	1x10	24 00
1¼ and 1½ in	54 00	1x12	25 00
2" No 1 Cuts	58 00	1x13 and up	26 00
No. 2, 1 in.	28 00	1¼ and 1½ & 2 in.	25 00
No. 2, 1¼, & 1½ in	43 00	Mill Culls, 1	20 00
No. 3, 1¼, and 1½	32 00	1¼, 1½ and 2 in	21 0
No. 3 1½" & 2"	35 00		
Dressing 1¼ in.	42 00		
1¼x10 and 12	45 00		

The following quotations on hardwoods represent the jobber's buying price at Buffalo and Tonawanda:

WHITE ASH.

1st & 2nd, 1 inch, 1¼ to 2 in	40 00 44 00	42 00 46 00	2½ to 4 in.	48 00	54 00
			Strips	22 00	24 00
			Com. and culls	14 00	22 00

BLACK AND BROWN ASH.

1st & 2nd, 6 inch up,	40 00	42 00	Com. & good culls	14 00	20 00

BIRCH.

1st & 2nd, 6 inch & up, red	40 00	42 00	1st & 2nd, white, 6" & up,	30 00	32 00
			Com. & good culls	16 00	18 00

ELM.

1st & 2d, rock, 6in & up	26 00	28 00	1st & 2d, soft, 6 in & up,	26 00	28 00
Common and culls	15 00	17 00	Common and culls	10 00	17 00

MAPLE.

1st & 2nd hard	20 00	23 00	1st & 2nd, soft	20 00	23 00
Common and culls	14 00	15 00	Common and culls	12 00	13 00

ALBANY, N.Y.

FINE.

Uppers, 3 in.	90	93	1x12 inch shippers	$29	30
2½ in.	90	93	4/4 inch " 13" & up.	29	30
1 to 2 in.	83	85	4/4 Box boards 6" and up	23	24
4 inch uppers	95	100	10-in. dressing and better	40	45
Selects, 2½ in up	85	90	12-in. dressing and better	45	50
1 to 2 in.	73	75	Box, 1x10-in.	24	25
Fine common, 2½ in. and up	80	85	Box, 1x12	24	25
1 to 2 in.	60	62	No. 1 barn, 1x12	35	36
No. 1 cuts, 1 to 2 inch	55	60	1x10	32	33
No. 2	38	48	1x8	30	32
No. 3	35	40	No. 2 barn, 1x12	31	32
No. 1 molding, 1 to 2 in	50	55	1x10	30	2
No. 2 molding, 1 to 2 in.	38	40	1x8	28	30
Stained saps	32	40	Shaky clear, 1 to 6/4 in.	32	40
Bracket plank	35	45	" " 2 inch	38	40
Shelving boards, 12-in. up	40	45	Dressing	25	40
Dressing boards, narrow	28	32	Common	30	35
1x10 inch shipper	29	30			

LATH.

Pine	$4 00	Spruce	$4 00

SHINGLES.

Sawed Pine ex. xxxx	$4 75	$5 00	Bound butts, 6 x 18	$5 00	5 25
Clear butts	3 75	3 75	Hemlock	2 00	2 25
Smooth 6 x 18	4 50	4 75	Spruce	2 00	2 25

BOSTON, MASS.

White Pine Uppers, 1 to 2 inch	$88 00 to	$90 00
Selects, 1 to 2 inch	76 00	80 00
Fine Common, 1 inch	60 00	64 00
1¼ to 2 inch	63 00	66 00
No. 1 Cuts, 1 inch	48 00	50 00
1¼ to 2 inch	56 00	62 00
No. 2 Cuts, 1 inch	31 00	32 00
1¼ to 2 inch	45 00	48 00
Barn Boards, No. 1	35 00	43 00
No. 2	33 00	37 00
No. 3	30 00	32 00
Spruce, 10 and 12 in. dimension	25 00	26 00
9 in. and under	23 00	24 00
10 and 12 in. random lengths, 10 ft. and up		25 00
2x3, 2x4, 2x5, 2x6, 2x7 and 3x4 random lengths, 10 ft. and up	20 00	22 00
All other random lengths, 9 in. and under, 10 ft. and up	19 00	23 00
5 in. and up merchantable boards, 8 ft. & up, p. 1 s		20 00
Out Spruce boards, p. 1 s		16 00
1x2 and 1x3 furring p. 1 s clipped and bundled		21 00
1½" spruce laths		4 50
1½" " "		4 00

NEW BRUNSWICK CEDAR SHINGLES.

Extras	3 50	3 60
Clears	2 95	3 05
Second clears	2 25	2 40
Clear Whites	2 10	2 15
Extra 1s (Clear whites out)	1 30	1 40
Extra 1s (Clear whites in)	1 50	1 60

BRITISH CLUMBIA SHINGLES.

Red Cedar Extras, 16 in. 5 butts to 2 in.		4 00
" Eurekas, 18 in. " "		4 40
" Perfections, 5 butts to 2¼ in.		5 10

CALENDARS RECEIVED.

The first 1907 calendar to reach the office of the CANADA LUMBERMAN carried the compliments of the Imperial Lumber Company, of Toronto. The picturesque feature was an excellent view of their Manchester yard, which has a capacity of three million feet of lumber.

The calendar of the Brantford Carriage Company, Brantford, Ont., shows a very striking Indian scene.

The calendar of the McClure Lumber Company, Detroit, Mich., is of very pleasing design and will be appreciated by recipients.

The Whissel Lumber Company, wholesale and retail dealers in lumber, doors and windows, Buffalo, N.Y., are among those to whom we are indebted for a calendar.

The Canadian Fairbanks Company's calendar shows many of the specialties which they manufacture. A copy of this calendar may be had by any of our readers for the asking.

Messrs. Keenan Bros., Limited, wholesale hardwood, hemlock and pine lumber, Owen Sound, Ont., always produce an artistic calendar. This year the subject is "The Death of the First Born," from the origina painting by W. H. Drake, A.N.A. It illustrates a tragedy of the vast sand wastes of the Soudan, where a lion cub has met his death and has been found by the mother.

Messrs. West & Peachey, manufacturers of the "Alligator" steam warping tugs, Simcoe, Ont., have very appropriately chosen as the subject to illustrate their 1907 calendar, an "Alligator" towing a raft of logs. It is a very attractive lithographic production 24x35 inches in size, and serves as a splendid advertisemens for their well-known tugs, now so largely used by lumbermen in getting logs through difficult places, such as swamps, portages, etc.

Again a useful office calendar has reached us from the B. Greening Wire Company, Hamilton, Ont. is the usual design, showing portraits of the president and incorporator of the present firm, the founder of the business in Hamilton, and the founder of the parent firm in Warrington, England. The illustration of the buildings shows that there was no extension in 1906, but we understan that plans are being worked out for a considerable increase during this year.

SECURED TITLE TO LUMBER.

The Elgie-Jarvis Lumber Company of Toronto bought from John Sieling his right to all the timber on Eagle Lake, Parry Sound, for $42,000. J. Edgar and J. H. Clemens had certain claims agaist Sieling, and the lumber company applied to the High Court for a declaration that they were freed from liability with regard to the claim on payment of the amount claimed into court. The Court granted the declaration asked for and directed payment of $306 to meet the Edgar claim and $400 against the Clemens claim. Any further litigation will be between Sieling and his two creditors.

BEST ON THE CONTINENT.

Messrs. Clarke Bros., Bear River, Nova Scotia, write: "We regard the CANADA LUMBERMAN AND WOOD-WORKER as the best paper devoted to the lumber business that is published in North America."

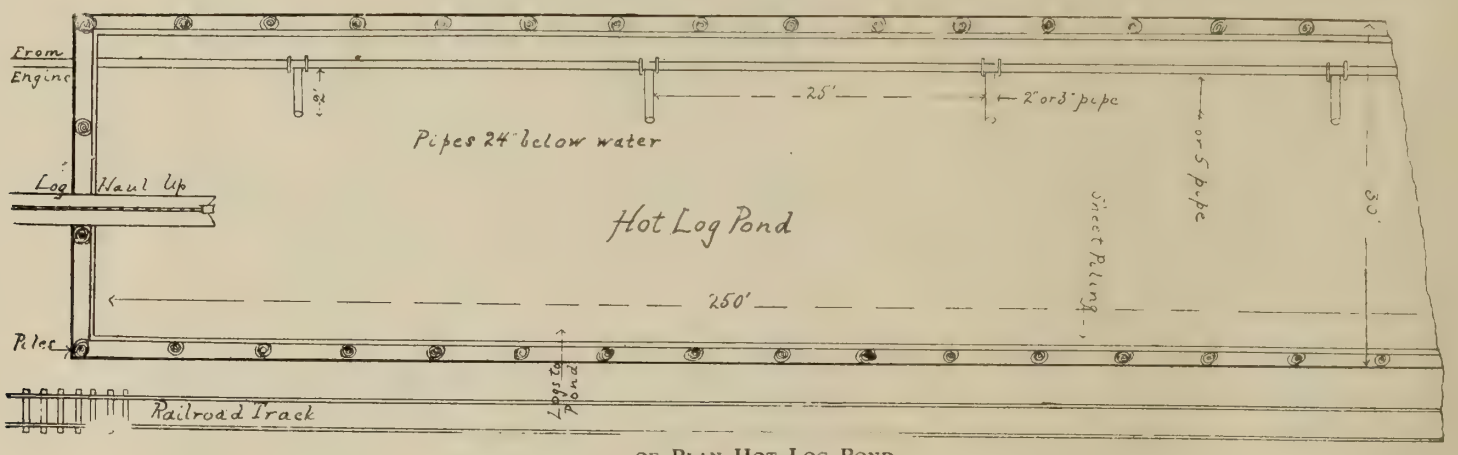
HOT LOG POND.

In response to numerous inquiries for details on the arrangement of a hot log pond, the Hardwood Record submits the attached plan, furnished by the M. Garland Company, the well-known manufacturers of sawmill and power transmission machinery, Bay City, Mich.

This type of pond is almost indispensable in northern latitudes for storing logs in winter, and with the steam shut off is equally convenient for summer use. The steam is supplied from the exhaust pipe of the engine. As noted, the four or five inch pipe is suspended from eighteen to twenty inches below the water line. At approximately every twenty-five feet a two-foot length of smaller pipe is extended from it two or three feet into the pond. The end pipe extending from the steam main should be placed on an elbow, and when the engine is shut down it should be turned up so as to avoid a vacuum ; or a valve can be placed in the exhaust pipe near the engine and closed when the engine is stopped.

The pond should be of a depth of five to six feet and when expedient should be arranged so that it may be drained occasionally, thus permitting bark and orher debris, which always accumulate in the bottom of a log pond, to be cleaned out.

The drawing accompanying this article needs very little explanation.



OF PLAN HOT LOG POND.

PERSONAL.

Mr. K. B. Bichland has retired from the Prestholdt Lumber Company, Hanley, Sask.

Mr. A. Russell Cameron, of Ottawa, aged 26, son of the late John Cameron, the millionaire lumberman, was found dead in his apartments with a bullet in his brain.

Mr. R. R. Weir, who for the last 32 years has been connected with lumbering at Orillia, Lindsay and Huntsville, has gone to Lethbridge, Alta., to reside permanently.

Mr. Duncan Sinclair, a member of the Alexander Black Lumber Company, Winnipeg, has been re-elected as School Trustee for Ward 3. Mr. Sinclair has resided in Winnipeg since the year 1882, and takes a deep interest in public affairs.

Owing to ill-health Mr. S. Ashfield, manager of the North-west Lumber Company, Winnipeg, has gone on an extended trip for three months. He will visit the Hot Springs in Arkansas, seeking relief from the pangs of rheumatism.

Mr. Robt. Connolly, manager of the Ontario Lumber Company at Loring, Ont., died recently from heart failure. Deceased was taken ill while at work and although medical assistance was obtained immediately, he died the next morning.

Mr. Amos J. Colston, who retired from the employ of Price Bros. & Company, lumber merchants, Quebec, last spring, has established a real estate business, with offices in the Hochelaga Bank Building, Quebec. In addition to his other line of business, he is handling on commission pine and spruce lumber, railway ties and pulpwood.

Mr. E. G. Blackwell has severed his connection as manager of the Manicougan & English Bay Export Company, Manicougan, Saguenay Que., to accept a similar position with the W. M. Ritter Lumber Company, of Columbus, Ohio. In renewing his subscription to the CANADA LUMBERMAN Mr. Blackwell remarks that although removing to the United States he is desirous of keeping in touch with the development of the lumber industry in Canada.

Hon. R. F. Green, Commissioner of Lands and Works for British Columbia, has tendered his resignation and announced that he would not be a candidate for Parliamentary honors at the forthcoming Provincial general election. Mr. Green assigned no reason for the step beyond the statement that private business made it impossible for him to longer remain in the Administration or in politics, and that he left the Government with a sincere admiration for the Premier.

TRADE NOTES.

We understand that the Dyment Foundry Company, of Barrie, Ont., are rebuilding their plant which was destroyed by fire a few weeks ago. They propose to build a foundry and machine shop double the capacity of their former building.

The Rodgers Manufacturing Company, recently organized, have purchased the works of the Goderich Engine Company at Goderich, Ont. It is the intention of this company to mauufacture all kinds of railway supplies, including steam shovels, snow ploughs, journal boxes and similar manufactures. Mr. L. E. Dancey is interested in the company.

The Clappison Packing Company, of Toronto, have moved from Church street to more commodious premises at 125 Queen street east, where they are carrying a complete line of packings and engineers' supplies. Their manager, Mr. Walter Woodburn, will be glad to see any of the company's patrons, who will receive a hearty welcome at their new abode.

Messrs. Taylor & McKenzie, of Guelph, Ont., have amalgamated with the Sussex Manufacturing Company, of Sussex, N. B., and will remove their plant to that place. The business will be carried on under the name of the Sussex Manufacturing Company, and in addition to their present lines of wood-working machinery, they will manufacture furniture, refrigerators, etc.

Readers of the CANADA LUMBEBMAN have no doubt learned with sincere regret of the financial difficulties of the William Hamilton Manufacturing Company, the well-known manufacturers of saw mill machinery, Peterboro, Ont. Upon the application of the Ontario Bank, the company was last month declared insolvent. The Trusts & Guarantee Company, of Toronto, has been appointed liquidator and has taken possession of the business. The William Hamilton Manufacturing Company has been controlled by its present owners practically since its inception in 1883, and it is very satisfactory to learn that the company is likely to be reorganized and certain changes made which should result in establishing the business on a more profitable basis.

The Madison Williams Manufacturing Company, manufacturers of turbines and saw mill machinery, have removed from Port Perry to Lindsay. In making an announcement to the trade they say : "For the past ten years we have enjoyed the patronage of many customers of the old firm of Paxton, Tate & Company, and with strict and careful attention to business, keeping in close touch with the advancement and progress of Canada, by adding many improvements in the manufacture of saw mill machinery and turbine water wheels, have placed on our books the names of hundreds of new customers and friends. Owing to the increasing demand for our goods, we find the old premises (formerly occupied by the Paxton Tate Company,) at Port Perry, Ontario, inadequate to meet the demands of our growing business. Our head office is now at Lindsay, Ontario, where we have erected new buildings of modern type, with a floor space of eighteen thousand square feet, equipped with electric travelling cranes and machine tools of the latest design. Two lines of railway run into our buildings—the Grand Trunk and Canadian Pacific. We feel justified in soliciting a continuance of your valuable patronage, and if intru ted with your inquiries, will be pleased to quote prices and guarantee that all orders turned out from our new plant will be of the bes ma'erial and workmanship."

ATKINS AND THE BELT PUNCH.

Messrs. E. C. Atkins & Company, the saw manufacturers, have just closed a deal whereby they secure the entire right to make and sell the Rogers belt punch. This little device for punching holes in belts, straps, etc., is too well known to require an introduction. It is light, convenient and does its work to perfection. The blade is sharpened steel, slips into the handle so that it is ouly necessary to pull out a thumb spring which fits into notches in the handle.

The Rogers belt punch sells for fifty cents. Many of the best jobbers carry them, or it can be bought through E. C. Atkins & Company at Indianapolis or any of their branch houses.

The Gulf Lumber Company, Sidney, B. C., are making extensive improvements to their mill. They are erecting a planing shed 80 feet by 50 feet and will install two planers as soon as the building is completed. The company are also constructing a combined wharf and breakwater, which when finished will greatly facilitate shipping.

A party of capitalists who have purchased six miles of timber limits in the Capilano valley have signified their intention of spending $500,000 in the erection of mills and installation of plant. Unless arrangements can be made with the British Columbia Electric Railway Company to extend their line up to the company's limits, a steam logging railway will be constructed. Other expenditures contemplated are $60,000 for a logging road for supplies and camps ; $50,000 for a mill which will be located about a mile above the Big Pool ; and about $40,000 in shingle-mills and incidental equipment.

THE NEW CANADIAN TARIFF

Few Changes are Made, while the British Preference is Continued and a Favored Nation Tariff Adopted.

Just after the December number of the CANADA LUMBERMAN had gone to press, Hon. Mr. Fielding submitted to the House of Commons the resolution embodying the new Canadian tariff. It is made up of three sections, namely, the British preference, which the Minister says is a good thing and has given Canada prominence in the eyes of the Empire; the favored nation tariff, which provides for special treatment to those nations which give Canada the benefit of lower duties, and the general tariff. The tariff is a revision in form rather than substance, as the vastly greater part of the goods imported into Canada will be entered under either the general column or the British preference. The British preference has been changed by the abolition of the 33⅓ per cent. discount and the substitution therefor of a special discount for each article. The general column, under which the greater part of imported goods will be entered, is not radically different from the existing general tariff.

The changes in which readers of this journal may be interested are as follows :

Shovel handles, increased from free to 15 per cent.

Rubber belting, increased from 25 to 27½ per cent.

Axes, reduced from 25 to 22½ per cent.

Wood belt pulleys, increased from 25 to 27½ per cent.

Iron pulleys, reduced from 30 to 27½ per cent.

Rough iron castings, increased from 25 to 30 per cent.

Boiler plates, from 10 per cent. to $7.00 per ton.

Babbitt metal, increased from 10 to 15 per cent.

Railway switches, increased from 30 to 32½ per cent.

Gasoline, reduced from 2½ per cent. to free.

THE RESOLUTION.

After the usual definition clauses the resolution as presented by Mr. Fielding proceeds as follows :—

FAVORED NATION TARIFF.

(2) That the rates of customs, if any, set forth in column 2, "intermediate tariff," shall apply :—

(a) To goods the product or manufacture of any British or foreign country to which the benefits of such intermediate tariff shall have been extended in the manner hereinafter provided when imported direct from such foreign country or from a British country.

(3) That the rates of custom duties, if any, set forth in column 3, "general tariff," shall apply to all goods not entitled to admission under the intermediate tariff or under the British preferential tariff aforesaid.

(4) That proof of origin, as prescribed by the Minister of Customs, shall be furnished with the bill of entry at the custom house for goods admitted to entry under any of the tariffs in schedule A; and that the decision of the Minister of Customs shall be final as to the tariff or surtax applicable in any case to imported goods by reason of their origin;

Provided, that goods for which entry is claimed under the intermediate tariff shall be bona fide the produce or manufacture of a county which has been admitted to the benefits of such intermediate tariff;

Provided further that every manufactured article to be admitted under the British preferential tariff shall be bona fide the manufacture of a British country entitled to the benefits of such preferential tariff, and that a substantial portion of the value of the manufactured article has been produced by labor in one or other of such countries.

BRITISH PREFERENCE.

(4) That the Governor-in-Council may by order-in-council:

(a) Extend the benefit of the British preferential tariff to any British country not named in sub-section 1 of section 3 of the foregoing resolutions, and from and after the publication of such order-in-council in the Canada Gazette the British preferential tariff shall apply to goods the produce or manufacture of such British country, subject to the provisions of these resolutions.

(b) Withdraw the benefit of the British preferential tariff from any British country (other than the United Kingdom), which has received the same, and from and after the publication of such order in the Canada Gazette, the general tariff, or the intermediate tariff, as mentioned in the said order, shall apply to goods the produce or manufacture of such British country, subject to the provision of these resolutions.

(c) From time to time, in consideration of benefits satisfactory to the Governor-in-council, he may extend the benefit of the intermediate tariff, in whole or in part, to any British or foreign country, the produce or manufactures of which have previously been subject to the rates of customs duties set forth in the general tariff, and from and after the publication of such order in the Canada Gazette, the rates of duty set forth in the intermediate tariff, so far as they are mentioned in the said order, shall apply to goods the produce or manufacture of such British or foreign country, when imported direct from such foreign country or from a British country, subject to the provisions of these resolutions; and

(d) Withdraw the benefit of the intermediate tariff from any country to which it has been extended, and from and after the publication of such order in the Canada Gazette, the rates of customs duties set forth in the general tariff shall apply to goods the produce or manufacture of such country, subject to the provisions of these resolutions.

THE DUMPING CLAUSE RETAINED.

(5) That in case of articles exported to Canada of a class or kind made in Canada, if the export or actual selling price in Canada be less than the fair market value of the same article when sold for home consumption in the usual and ordinary course in the country whence exported to Canada at the time of its exportation to Canada, there shall, in addition to the duties otherwise established, be levied, collected and paid on such article, on its importation into Canada, a special duty (or dumping duty) equal to the difference between the said selling price of the article for export and the said fair market value thereof for home consumption :

Provided that the said special duty shall not exceed 15 per cent. ad valorem in any case.

Provided also that the following goods shall be exempt from such special duty, viz:—

(A) Goods whereon the duties otherwise established are equal to 50 per cent. ad valorem;

(B) Goods of a class subject to exercise duty in Canada;

(C) Sugar refined in the United Kingdom.

Provided further that excise duties shall be disregarded in estimating the market value of goods for the purposes of special duty when the goods are entitled to entry under the British preferential tariff.

SURTAX CONTINUED.

(6) That articles which are the produce or manufacture of any foreign country which treats imports from Canada less favorably than those from other countries may be subject to a surtax over and above the duties specified in the said schedule A, such surtax in every case to be one-third of the duty specified in the general tariff in the said sechdule A.

(1) That any question arising as to any foreign county or goods coming under the operations of the provisions in regard to the surtax shall be decided by the Minister of Customs, whose decision shall be final;

Provided that the governor-in-council may make regulations for carrying out the purposes of this resolution in regard to such surtax, and may by order-in-council from time to time suspend the surtax from application to the goods of any country.

SECTIONS OF THE NEW TARIFF.

METALS AND MANUFACTURES THEREOF.

	Brit. Pf. Tariff	Inter Tariff	Gen. Tariff
Banbit metal and type metal, in blocks, bars, plates and sheets....	10	15	15
Wire rope, stranded or twisted wire, clothes lines, picture or other twisted wire and cable, n. o. p....	17½	22½	25
Wire, cloth or wove wire, and wire netting of iron or steel.....	20	27½	30
Locomotives and motor cars, for railways and tramways, n. o. p...	22½	30	35
Axes, scythes, sickles or reaping hooks, hay or straw knives, edging knives, hoes, rakes n.o.p. and and pronged forks.....	15	20	22½
Belt pulleys of all kinds for power transmission.....	15	25	27½
Manufactures, articles or wares of iron or steel or of which iron and steel (or either) are the component materials of chief value, n.o.p.....	20	27½	30
Telephone and telegraph instruments, electric and galvanic batteries, electric motors, dynamos, generators, sockets, insulators of all kinds, electric apparatus, n.o.p., boilers, n.o.p., and all machinery composed wholly or in part of iron or steel n.o.p. and integral parts of all machinery specified in this item..	15	25	27½

WOOD AND MANUFACTURES THEREOF.

Corkwood, or cork bark, unmanufactured.....	Free	Free	Free
Manufactures of cork wood or cork bark, n.o.p.	15	17½	20
Corks, manufactured from cork wood, over three-fourths of an inch in diameter, measured at the larger end, per pound	.04	.05	.05
Corks, manufactured from cork wood, three-fourths of an inch and less in diameter, measured at the larger end, per pound.....	.06.	.08	.08
Logs and ronud unmanufactured timber; handle, heading, stave and shingle bolts; firewood, hop, poles, fence posts and railway ties	Free	Free	Free
Shovel handles, wholly of wood	10	12½	15
Planks, boards and other lumber of wood, sawn, split or cut, and dressed on one side only, but not further manufactured.....	Free	Free	Free
Sawn boards, planks and deals, plain or dressed on one or both sides, when the edges thereof are joined or tongued and grooved	17½	22½	25
Manufactures of wood, n.o.p.	17½	17½	25
Veneers of wood, not over three thirty-seconds of an inch in thickness.....	10	12½	15
Mouldings of wood, plain, gilded or otherwise further manufactured	17½	22½	25

TRADE NOTES.

The A. R. Williams Machinery Company, Vancouver, B. C., have taken over the agency of the Dodge Manufacturing Company of Toronto. Several car loads of Dodge goods have been shipped out, and henceforth the Vancouver branch of A. R. Williams Machinery Company will be headquarters in British Columbia for power transmission machinery. The Dodge standard wood split pulley, Dodge iron split pulleys, Dodge split and solid friction clutches, Dodge ball and socket adjustable hangers, ball and socket self-oiling pilllow blocks, safety collars, and all such material will be constantly in stock. We are sure the various power users throughout British Columbia will welcome this new branch under the able management of Mr. C. K. Kennedy.

THE NEWS

ONTARIO.

—The Rat Portage Lumber Company are building a saw mill at Banning, Ont.

—While loading logs at Tillsonburg, Ont., Joseph Cornfoot, of Mount Elgin, was killed.

—L. A. Ross, owner of a saw mill at Cornwall, is announced to have assigned to W. R. Mack.

—Messrs. James Cameron and Wm. Allan have leased a saw mill at Playfair and will operate same.

—It is understood that the Robb Lumber Company intend rebuilding their saw mtll near South River, Ont.

—"Bayview House," the residence of Col. Rathbun, at Deseronto, Ont., was totally destroyed by fire on December 19th.

—Mr. L. A. DeLaplante, lumber merchant, Toronto, is erecting a large warehouse and office at East Toronto, Ont.

—The Carney Lumber Company, Limited, of Owen Sound, have recently had additional sidings constructed in their yards.

—The Lufkin Rule & Measuring Company, of Saginaw, Mich., have opened a Canadian branch at Windsor, Ont.

—The sash and door factory of Mr. R.G. Hodgins, of Shawville, destroyed by fire in September, has been rebuilt and is once more in operation.

—The Foss Lumber Company, Limited, Winnipeg, Man., will apply to the Manitoba Government for authority to increase their capital stock from $20,000 to $150,000.

—Mr. Andrew Irwin, who for some time has been in the lumber business at Simcoe, has decided to remove to Blenheim next summer, where he will carry on a general lumber trade.

—Mr. W. C. Cook, President of the Duluth, Rainy Lake & Winnipeg Railway, recently visited Fort Frances, Ont., where it is said that he is interested in a saw-mill having a capacity of 100,000,000 feet per year.

—Mr. B. Quinn, of Windsor Mills, Que., is erecting a a mill to saw the timber on the newly acquired four lots in Windsor, part of the Canada Paper Company's limits. It is thought it will take him four years to clear the land.

—Mr. Ivon Joanisse, foreman of Springer Lumber Company's mill, Sturgeon Falls, was instantly killed on December 13th. A number of men were engaged in taking down a smoke-stack when a pole gave way and struck the unfortunate man.

—The Ottawa Valley Development Company are seeking incorporation from the Dominion Government with power to deal in lumber and pulp wood and their products. O'Meara & MacInnes, Ottawa, Ont., are solictors for the applicants.

—Trussler Bros., Limited, of Trout Creek, Ont., practically rebuilt their water power saw mill last year, blasting out the rock and lowering the wheel about ten feet. They will have two saw mills in operation as soon as the season of 1907 opens.

Hon. Mr. Paterson, in answer to Mr. Bennett in the Dominion Parliament, said that the following free imports of lumber were made during the last fiscal year: Pitch pine planks and boards, 22,576,299 feet b. m.; sycamore boards and planks, 24,951 feet b.m.

—Mr. J. D. McArthur, who has a large contract for construction work for the Grand Trunk Pacific Railway, is building a saw mill at Atikokan, Ont., for cutting bridge timber. It is estimated that some 30 saw mills will be in operation next spring in the Fort Frances district.

—Martin Bros. have purchased the lumber interests of Mr. M. Bird, Utterson, and also the property of Mr. John Darling at McEwan's Siding. There are about 1200 acres of timber and two mills on the limit, and it is estimated that there will be a ten years' cut. Mr. Daniel Baker, formerly of Uhtoff, will act as manager.

—Imports of lumber from Canada to Burlington, Vermont, were larger in 1906 than in any year since 1897, no fewer than 112 canal boats having arrived there during the summer and fall. The average number of boats for many years has been considerably under 100, except in 1897, when it ran considerably above that mark.

—The Lethbridge Collieries, Limited, Winnipeg, Man., has been incorporated by the Dominion Government with a capital of $500,000. The concern has, among others powers, authority to carry on a general lumber business. Among those interested are: I. Cockburn, J. S. Hough, D. E. Adams, D. R. Dingwall, and A. Burrows.

—Mr. S. Knechtel, formerly manager of the Knechtel Wood Turning & Furniture Company, is building a large wood-working plant and foundry at Southampton, to be known as the Southampton Iron Works. The wood-working factory will be 60x85 feet, two stories high, and will be devoted exclusively to the manufacture of wood-turnings and mouldings.

—A company is being formed for the purpose of developing a large water power on the Quinze river, at the head of Lake Temiskaming. The scheme includes the operation of a large saw-milling industry on the river, as there is an abundance of splendid spruce in the vicinity. Mr. J. J. McFadden, of Sault Ste. Marie, Mr. John Ferguson, of Renfrew, and Mr. J. B. Klock, of Montreal, all well-known lumbermen, are interested in the scheme.

THE EASTERN PROVINCES.

—Stozime Labance was killed at Labance's saw mill at Little Brook, N.S., on December 10th.

—F. Blanchette and R. Boisvert, of Drummondville, Que., have registered their lumber business as Blanchette & Boisvert.

—It is understood that a deal has been put through whereby the business of the Fredericton Boom Company becomes the property of certain lumbermen and mill owners operating on the St. John River.

—The saw mill formerly owned by Col. McAuley, Coaticook, Que., has been purchased by Messrs. Hall & McIver, who have remodelled the plant and propose to handle 2,000,000 feet of lumber during the coming season.

—The Grand Valley Lumber Company, of Grand Valley, Que., were recently the losers of a large quantity of lumber which was piled near the sea shore and was carried away by the high tides, which have recently been the subject of much comment.

Among the companies recently incorporated by the New Brunswick Government is the Stothart Mercantile Company, Limited, of Newcastle, N. B., who purpose carrying on a general lumber business. G. S. Stothart, G. G. Stothart and others are directors of the company.

—Arthur Sewell has leased the mill near Zionsville, N. B., owned by Hanson Bros., and have also purchased timber land in the same vicinity. Mr. Sewell will operate the mill and will confine his business principally to cutting laths for export purposes.

—A fatal accident happened in the lumbering camp of A. &. S. Watkins, near Tay Mills, N. B., not long ago, when E. Walker was caught beneath a pile of logs and instantly killed. Deceased was a native of Birmingham, England, and had been in New Brunswick only four months. He was thirty-one years of age and is survived by a widow and one child.

—At the annual meeting of the Montreal Lumber Association held recently, the election of officers resulted as follows: President, E. M. Nicholson; Vice-President, Alex. McLaurin; Treasurer, F. W. Cotter; Committee, W. J. Brennan, O. Dufresne, jr., J. T. Marchand and J. H. Redfern. Mr. McLaurin was also chosen as the association's candidate for the Board of Trade Council.

—Sir Wm. Van Horne recently spoke on the question of the devastation of spruce timber in Canada. He believes that a small export duty on pulpwood would encourage American capitalists to erect mills in this country. He pointed out that a cord of pulp wood yields to all interests in Canada, the individual, the government, and the transportation companies, only six dollars. The same cord converted into ground wood pulp would yeield $13; if made into sulphite pulp, $21, and if made into paper at least $36 and for these and other reasons he suggests that something be done to compel home manufacture.

The announcement was made last month of the consolidation of the Canadian Rubber Company of Montreal, the Granby Rubber Company of Granby, Que., and the Maple Leaf Rubber Company of Port Dalhousie, Ont. The new concern will be known as the Canadian Consolidated Rubber Company and will have a capitalization of $5,000,000. It is understood that Mr. S. H. C. Miner, the head of the Granby Company, will be president of the new concern, while Mr. G. W. Stephens, M. L. A., who has recently directed the Canadian Rubber Company, will be vice-president. Mr. D. Lorne McGibbon will be second vice-president and general manager.

MANITOBA.

—P. J. Mullen, dealer in lumber, harness and implements, Millet, Alta., has sold his lumber business.

—The Walters Lumber Company, Strathcona, Alta., will, according to report, build a saw mill at Edmonton, at a cost of about $15,000.

—The Ferguson & Mullen Lumber Company, Sedgwick, Alta., has been succeeded by the Pigeon Lake Saw Mill Company, Limited.

—Mr. John Herron, M. P. for Alberta, has requested the Dominion Parliament to appoint a committee to investigate a combine which is said exist to among the lumber dealers of Western Canada.

—The Stewart & Mathews Co., Winnipeg, have been incorporated with a capital of $500,000, to carry on a general lumber business, etc. The provisional directors include E. B. Tainter and C. W. Fillmore of Winnipeg.

—John Moore, who was engaged cutting timber at Rickers Camp 100 miles up the Saskatchewan river, was instantly killed by being struck by a branch of a tree. The body was taken to Edmonton, Alta., for interment.

—The Manitoba Government recently granted a charter to the Globe Lumber Company, Limited, of Winnipeg, Man. The incorporators are H. C. Webb, A. Lucas, C. W. Tait, A. B. Donley, and C. W. Bradshaw, all of Winnipeg. The company will carry on a general lumber business, both wholesale and retail.

—Messrs. Shead & Johnston, lumber dealers of Calgary, Alberta, who recently purchased the mill at Hosmer formerly owned by the Black Lumber Company of Winnipeg, have started to completely overhaul the plant and intend to greatly increase its cutting

Saw Mill at Rainy Lake, Ont. Yards and Planing Mill at Hamilton, Ont.
THE M. BRENNEN & SONS MFG. CO. LTD.
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capacity to be ready for next se son's cutting. They have a large number of men in the woods, cutting timber in preparation for next year s work.

—The Davidson Manufacturing Company, of Davidson, Sask., which was recently organized are opening a planing mill and sash and door factory.

—The planing mill of Lalonde & Milord Winnipeg, Man., was partially destroyed by fire last month. The fire began in the engine room and before it could be extinguished, damage to the extent of $6,000 had been done to the interior of the mill and stock.

—The Beaver Lumber Company, Winnipeg, Man., was recently incorporated by the Dominion Government with an authorized capital of $3,000. The incorporators are John Love, S. P. Clark, grain merchants; R. G. Gibson, H. Crowe, lumber merchants; J. H. Munson, barrister-at-law; F. N. Norse, hardware merchant, all of Winnipeg, Man., and Charles Willoughby, contractor, W. H. Duncan, and T. B. Patton, lumber merchants, all of Regina, Sask. Robert Gourlay, assistant manager and secretary of the company, was until recently manager of the Union Bank at Carberry, Man.

—The Beaver Lumber Company, of Winnipeg, have purchased the business of the Porto Rico Lumber Company. The properties bought include the large planing mill and factory in Moose Jaw, Sask., and saw mills at Moyie and Ymir, B. C. The principals of the Porto Rico Lumber Company are Mr. J. D. McArthur, the well known railroad contractor, and Mr. J. A. Dewar. The purchasing company is a new organization, and is an amalgamation of the Prairie Lumber Company, the Gibson Lumber Company, of Winnipeg, and the Regina Lumber and Supply Company of Regina. The new proprietors take immediate possession upon the completion of stock taking. Mr. Dewar will remain in charge of the Ymir and Moyie properties for the new company until such time as they can complete their organization, and Mr. McDougall will continue to manage the Moose Jaw factory.

BRITISH COLUMBIA.

—Messrs. Woods & Spicer, shingle manufacturers, Vancouver, have had to remove their dry kilns from the south to the east end of the mill to make way for the extension of the local C.P.R. yards. They are also erecting a brick burner, 18 feet diameter inside by 30 feet high.

—The factories and dry kiln of the new Anglo-American Lumber Company of Vancouver are now in operation and running full swing. A large order of factory work was recently shipped by them, and they are manufacturing all kinds of sash, doors, windows, mouldings, office furniture, desks, etc., and report a large number of orders, both local and provincial.

—The Great Northern Railway has arranged to haul lumber from Baynes Lake and the other mills along its line between Fernie B. C., and the American Boundary, to connect with the C. P. R., at a much lower rate than formerly. This rate is actually lower than that charged for hauling from Cedar Valley to Fernie, which is only about 2 or 3 miles; consequently the North American Lumber Company have decided to postpone the building of their proposed new mill at Cedar Valley until a better arrangement in the rates can be secured. They are proceeding, however, with another mill on Findlay Creek, near Wardner, which they hope to have in operation by spring. This mill will contain a double-cutting band-saw, and will be thoroughly modern and up-to-date in every respect. They are also building a logging railway from the limits to their Cedar Valley mill site, where they will haul stock to be ultimately cut. They have purchased a Heisler locomotive for this purpose.

—The Fraser Sawmills Company are about to erect a three-storey hotel on their property at Millside. The hotel will be fitted up as a club for the employees of

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Manufacturers and Installers of
Modern, Up-to-Date and Successful
INDUCED DRAFT SYSTEMS
Best thing on earth for Sawmills.
No sparks, no danger, little smoke.
Short draft and even draft in all weather.
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Columbia Blower Co.
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NEW and Re-Laying from 12 to 60 lbs. per yard with fastenings; for **Lumbering, Mining** and **Contracting Work.** Also about 25 tons of good second hand **Boom Chain** 5/8" and 3/4". Immediate shipment. Get our prices before purchasing.
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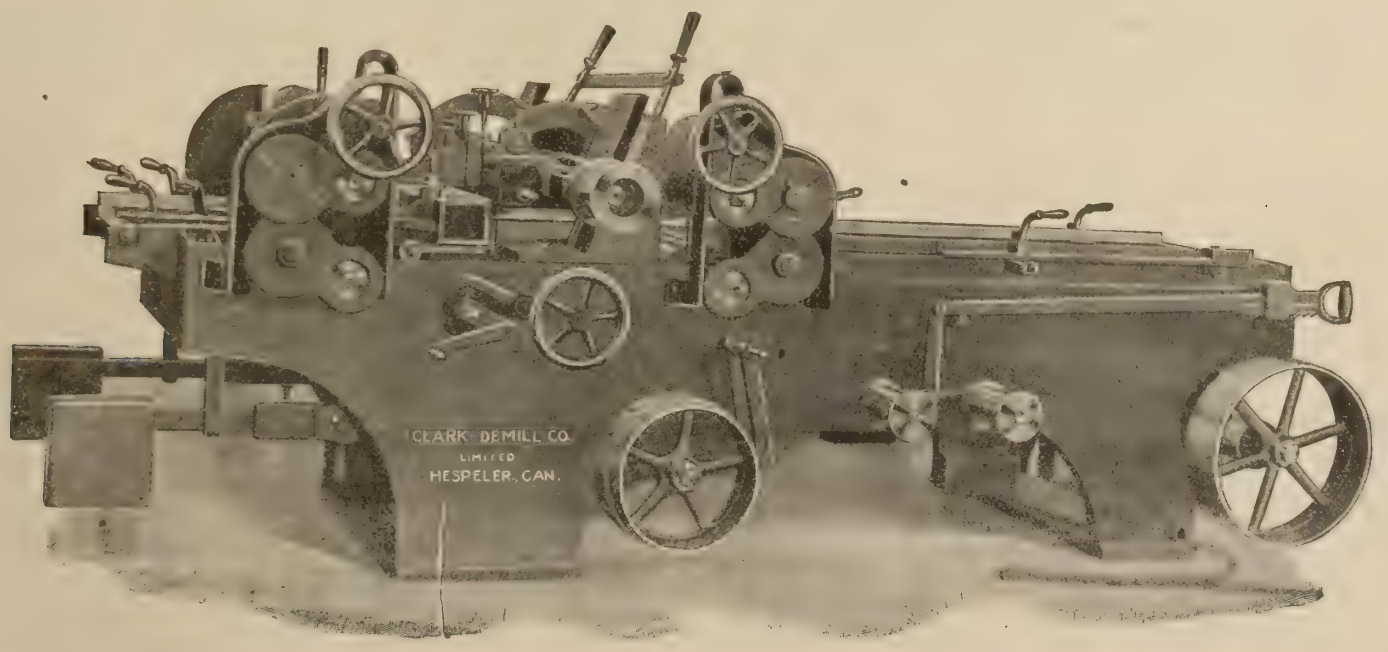
OUR NO. 116
PLANER AND MATCHER, SINGLE SURFACER
24 in. x 7 in.
We Also Make this Machine with Double Cylinders



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Successors to Clark & Demill, of Galt, Ont.
Western Representatives: The Waterous Engine Works Co., Limited, Winnipeg, Man.

the company, and provision will be made for a bowling alley, reading rooms, a library and other apartments.

—Alfred Balong, aged 28, a lumberman employed by the Elk Lumber Company, met with a fatal accident while felling trees December 12th.

—A man named William Kelly, from Creemore, was killed December 12th, in the Porto Rico logging camp, five miles from Moyie, B. C , by a falling tree.

—A serious fire occurred at Vancouver on November 20th, when the factories and moulding and glazing rooms in Robertson & Hackett's mill were destroyed. The estimated loss is $50,000.

—Messrs. Dingwell & Hagen are about to start a saw mill at Cowichan Station. They have purchased timber lands close to the railway, and will start cutting as soon as their machinery has been delivered.

—The Victoria Lumber Company, of Chemainus, have completed the equipment of their new machine shop. Two large lathes, a travelling crane, engine and other machinery have been installed.

—A boom of logs, containing about 400,000 feet has been seized at Vancouver by Timber Officer Murray, who alleges that the licenses of the men who cut out the timber have expired and have not been renewed.

—Another large saw mill with a capacity of 150,000 feet per day is to be built on the west coast of Vancouver Island by the B. F. Graham Lumber Company.

—The shingle mill at New Westminster, until recently operated by Mr. Joseph Cameron, has been purchased by Mr. John Reardon, of the Fraser River Sawmills, who intends to reopen the mill in the near future.

A serious accident occured at Palliser recently, when Everett Bogardis, an employee of the Palliser Lumber Company, was caught in a log jam. He was seriously injured and was removed to the hospital at Golden.

—A new saw mill has recently been erected at Elgin on the banks of the Nicomekl river by Mr. John Hadden, of Cloverdale. It is the intention of Mr. Hadden to add a shingle mill and dry kiln to the plant in the near future. The capacity of the mill is 20,000 feet per day and at the present time only cedar is being handled.

—Mr. C. J. Forster, of the Sparwood Lumber Company, of Sparwood, B. C., has decided to immediately increase the capacity of his mill by the installation of a couple of boilers and a new planer.

—The dry kilns and a quantity of lumber, the property of the Royal City Mills, Vancouver, were recently destroyed by fire. The damage to the kilns was $10,000 and to the lumber $3,000. The rebuilding of the kilns will be commenced immediately.

—The Quatsino Pulp Company, Limited, Victoria, have already contracted for their machinery, which they expect will be installed next spring. The capacity of the plant when in operation will be eighty tons per day and the company intend erecting a paper mill in the near future.

—The Williams Manufacturing Company, of Vancouver, are having a new tug built which they will operate between Vancouver and their timber limits up the Coast. The boat will be 65 feet long with a fourteen foot beam and is being constructed by Walter Emerson.

The H. L. Jenkins Lumber Company have removed their head office from Seattle, Wash., to Vancouver. They already employ 250 men in the six camps which they operate in British Columbia, and are completing plans for the erection of a new sawmill with an annual capacity of 50,000,000 feet.

—The Nanaimo Developing Company is a new organization which has been formed in Nanaimo, B. C., for the purpose of handling and advancing property in Nanaimo and the surrounding country. This company will take a special interest in the developing of the mining and timber districts tributary to that city. The company consists of local men and is under the management of Mr. W. J. Ritchie, formerly of Vancouver, who has had varied experience in this line.

—Mr. Joseph Cameron, of Sapperton, has purchased the plant of the Chilliwack Lumber Company, Chilliwack, and intends to move same to Mission, where he has large timber holdings. The purchase price is said to have been $3,500.

—The Elk Lumber Company, of Fernie, have decided to install larger boilers and otherwise improve plant. Mr. A. D. McDonald, of Calgary, Alta., has purchased timber claims in the neighborhood of Swinton, and in all probability will erect a new saw mill.

—The Crows Nest Coal Company are installing a portable mill at Hillcrest near Frank, Alberta, to cut construction timbers for their mines and for building purposes. The order for the entire outfit was placed with he A. J. Burton Saw Company of Vancouver, B. C.

—Mr. Hales H. Ross, of Ross Bros. Co., Elkmouth, B. C. left during the latter part of November for Minneapolis, to purchase sawmill machinery for the new mill which they are about to build on the Kootenay River, on the opposite side of the Elk River from their old mill site.

—The capacity of the mill of the Alberta Lumber Company, of Vancouver, has been nearly doubled within the past few months by the installation of a new steam gunshot feed on the carriage, another engine and other improvements. All this was installed by the A. R. Williams Machinery Company.

—Mr. Joseph Patrick, of the Drummond Lumber Company, of Montreal, recently secured large timber holdings on the Slocan lake, in British Columbia, and will construct a modern mill on the Slocan river, near where it empties into the Kootenay river, during the coming year. A large dam will be built across the Slocan to hold logs. Mr. Patrick spent several days in Nelson, B. C., recently in the interests of this new departure.

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Lumber and Woodworking Risks Exclusively.

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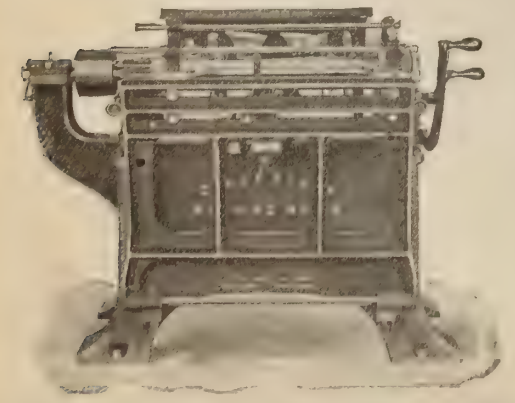
You Can Save Money Turning Balusters

Besides Making More of Them and Much Better Ones



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Our No. 2 Baluster Machine

Turns Balusters, Spindles, Table Legs, any pattern, hard or soft wood, 1,000 pieces daily. Does perfect work at less cost than by hand. Stock is held in chucks, instead of between centres, avoiding all vibration. If you make balusters you should investigate carefully.

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Mahogany does not show a
more beautiful grain than does

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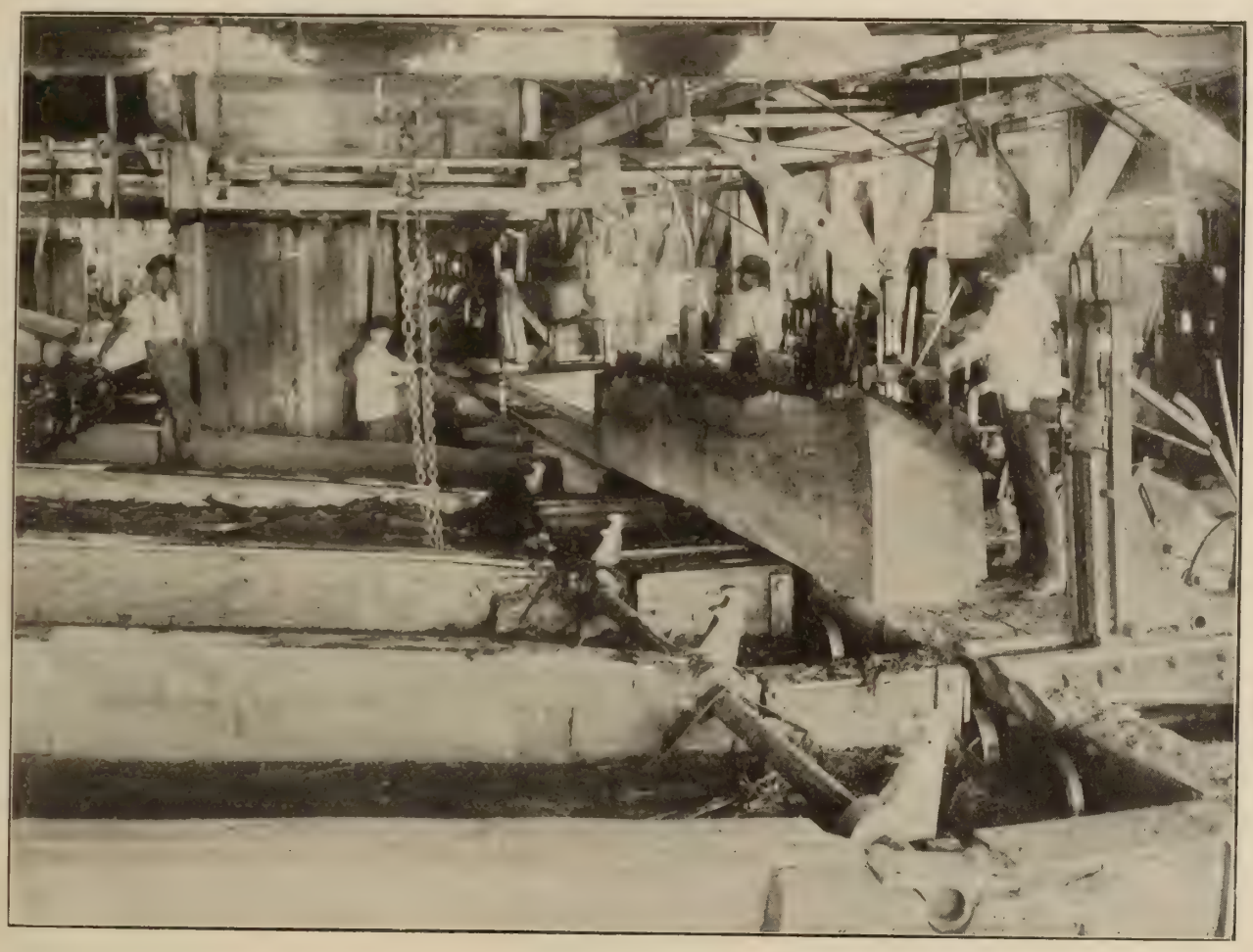

For interior finish we believe it is the best wood on the market today, and we can give it to you worked to any pattern desired. Will further add that our wood has no equal for exterior use, but will prove it to you later.

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NEW ORLEANS, U. S. A.

A Happy and Prosperous New Year to All

H. P. Eckardt & Co.
Toronto

THE OWEN SOUND IRON WORKS COMPANY.

An important enterprise in the town of Owen Sound, Ont., is that of the Owen Sound Iron Works Company, Limited, which has been in operation for nearly a decade. The business was originally owned by Geo. Corbett & Sons, but seven years ago was purchased by W. E. Todd, George Menzies and J. M. Wilson, forming a firm which was reorganized about a year later. J. M. Wilson continued as managing director. The other members of the present board of directors are : C.A. Fleming, president; J. C. Kennedy, vice-president; Geo. W. McLenhan, secretary and treasurer; John McQuaker and D. M. Buchart.

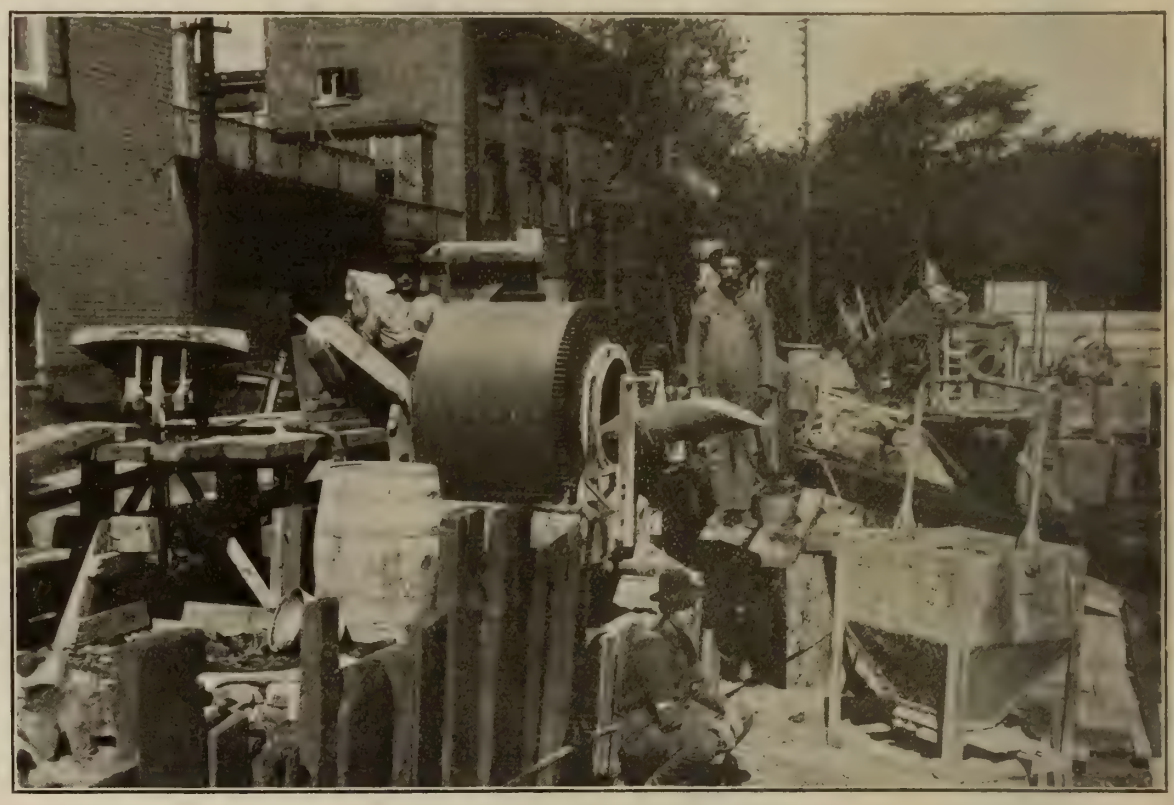
Two years ago a new building was erected on Marsh street, opposite the C.P.R. depot. It isconstructed of stone and comprises a machine shop 223 feet long, a foundry, a moulding shop 60 by 45 feet, pattern and boiler shops, and a melting room covering the remaining 137 feet of land in the site.

The foundry is modern in every detail and has a splendid equipment of machinery.

The manufactured product consists of general foundry work, but more especially machinery for mills and factories. Engines, boilers, saw, shingle and cement mill machinery, pulleys, hangers and shafting, are included among the products of the Owen Sound Iron Works Company, a specialty being made of shingle machines.

Such industries as this give a solid basis for any town's growth. They are important factors in the economic of the country, being real producers giving full value in return for all the market affords them.

Mr. C. E. Copeland has purchased property at Elmvale and intends to erect a saw mill.



VIEW SHOWING PART OF THE INTERIOR OF THE MACHINE SHOP OF THE OWEN SOUND IRON WORKS.

A REMINDER.

The advertiser who wishes to thoroughly cover the field of possible buyers should remember that the CANADA LUMBERMAN AND WOODWORKER gets off at the way stations where there is but one call to make, as well as at the big manufacturing towns. It goes every month where the solicitor can afford to go but once or twice a year. And it carries practical help that makes it welcome, that makes it a power in a field which is all its own.

Corrugated Iron
For Sidings, Roofings, Ceilings, Etc.
Absolutely free from defects—made from very finest sheets.
Each sheet is accurately squared, and the corrugations pressed one at a time—not rolled—giving an exact fit without waste.
Any desired size or gauge—galvanized or painted—straight or curved.
Send us your specifications.
The Metallic Roofing Co.
WHOLESALE MANFRS. LIMITED
TORONTO, CANADA.

—Mr. Jas. J. Ellison has purchased a mill site at Port Moody and will build without delay.

—The Ladysmith Lumber Company have purchased logging engines and additional equipment for logging operations.

—A deputation from the British Columbia Lumber & Shingle Manufacturers' Association will in all probability wait on Hon. R. F Green, Chief Commissioner of Lands and Works, in reference to the charges made by the government for the reservation of timber lands.

—An immense export lumber-mill is to be erected at Masset Harbor, Graham Island, in the Queen Charlotte group, by the B. F. Graham Lumber Company. A hundred square miles of timber limits have been purchased by the Company and the construction of a large mill is to be commenced in the spring.

—The proposal made to the British Columbia government by some of the coast sawmill owners that legislation be adopted, making it compulsory on the holder of the timber under license to cut a certain amount annually does not meet with the approval of loggers or speculators; in fact very few people take it seriously and a conference is being arranged with the Chief Commissioner of Lands and Works, to discuss the question.

—A prominent coast millman speaking to the CANADA LUMBERMAN recently stated that while there is quite a lot of hemlock on Vancouver Island, not much of it is being marketed at present. He stated that hemlock is the only wood known that will survive in the Phillipine Island, as the ants there will eat up most of other kinds. In this connection it is quite possible that the future will see large quanities of hemlock being exported to the Phillipines.

We make a specialty of shipping oats in bulk or sacks to Lumbermen delivered in any part of the Dominion.

Write or wire for prices.

OATS

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Wonderfully simple in construction. No chains, springs or gears. Embody the only principle (face down) permitting the practical use of rich facing material with less expensive material in back of blocks. Adaptable to any size block within capacity.

The same machine makes blocks in countless ornamental designs and natural stone effects.

Write and learn how easily, rapidly and profitably **one man** can turn out Concrete Building Blocks with an Ideal Machine.

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RAIL AND WATER SHIPMENT.

Haskell Lumber Company, Ltd.

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Band Sawed Hemlock, Spruce, Pine, Basswood, Birch, Oak, Butternut, Maple, Cedar and Ash Lumber, Lath and Shingles

SPECIALTIES: **Hemlock, Spruce and Pine Timbers**

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Saw Mills and Planing Mills located on C. P. R and Ottawa River 70 miles west of Montreal

Mr. Albert Bonner, an employee of the Elk Lumber Company, Fernie, was killed by a falling tree on December 12th.

The stores of the Bowman Lumber Company, at Comaplix, were recently destroyed by fire, entailing a loss of $15,000.

It is expected that the mill of the British Columbia Ties & Lumber Company, at Prince Rupert, will be in operation this month.

The Red Fir Lumber Company intend to make extensive additions to their mills, including the erection of cedar and shingle mills, and also a sash and door factory. The capacity of their present mill, which is 75,000 feet per day will also be doubled.

The British Columbia Mills Timber & Trading Company, Ltd., Vancouver, have closed down their "Hastings" sawmill temporarily, for the purpose of putting in the short side of the mill. This will consist of the installation of a 14 in. band saw for breakdown; a new gang edger, and the full complement of live rolls, transfers and trimmers. This will complete the equipment of this mill and will bring its capacity up to 250,000 feet per day of ten hours. This new machinery was supplied and installed by the Wm. H milton Manufacturing Company.

P. PAYETTE & CO.

Manufacturers of Saw Mill and Engine Machinery, and all kinds of Marine Machinery.

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Try it if you want the best at a moderate price.
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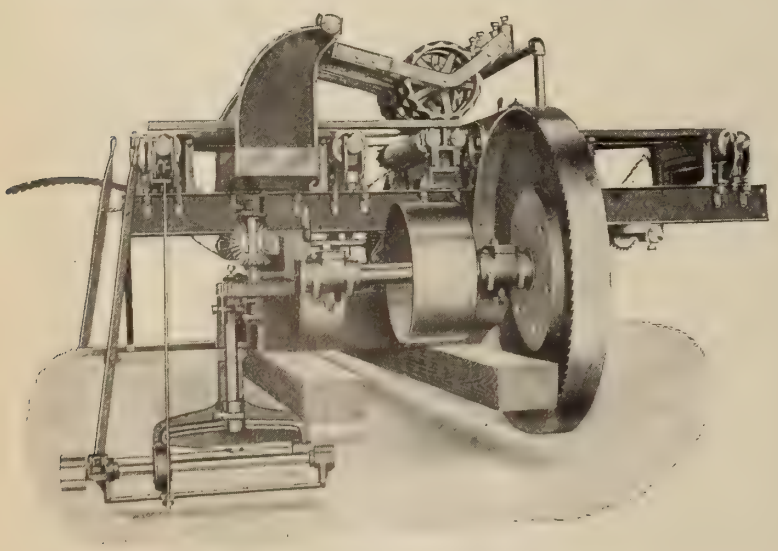

Horizontal Saw Mill Resaw

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SAGINAW, MICH., U. S. A.

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WINDOWS MOULDINGS TURNINGS BRACKETS

DETAIL WORK A SPECIALTY WITH US

Lumber — Lath — Shingles

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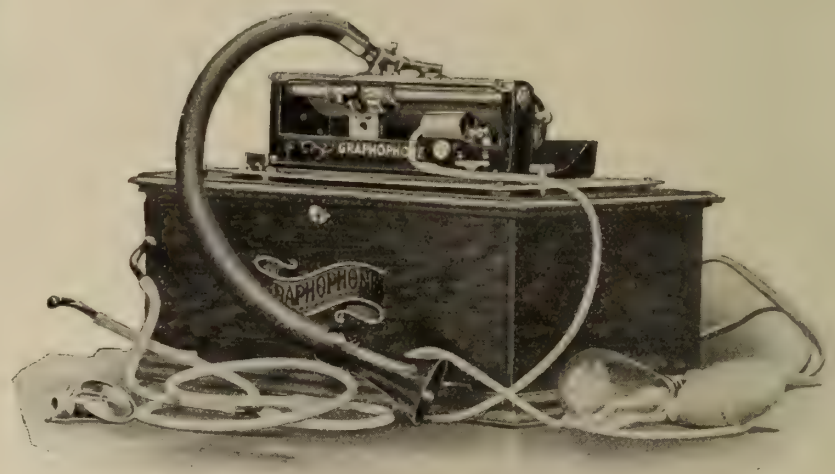

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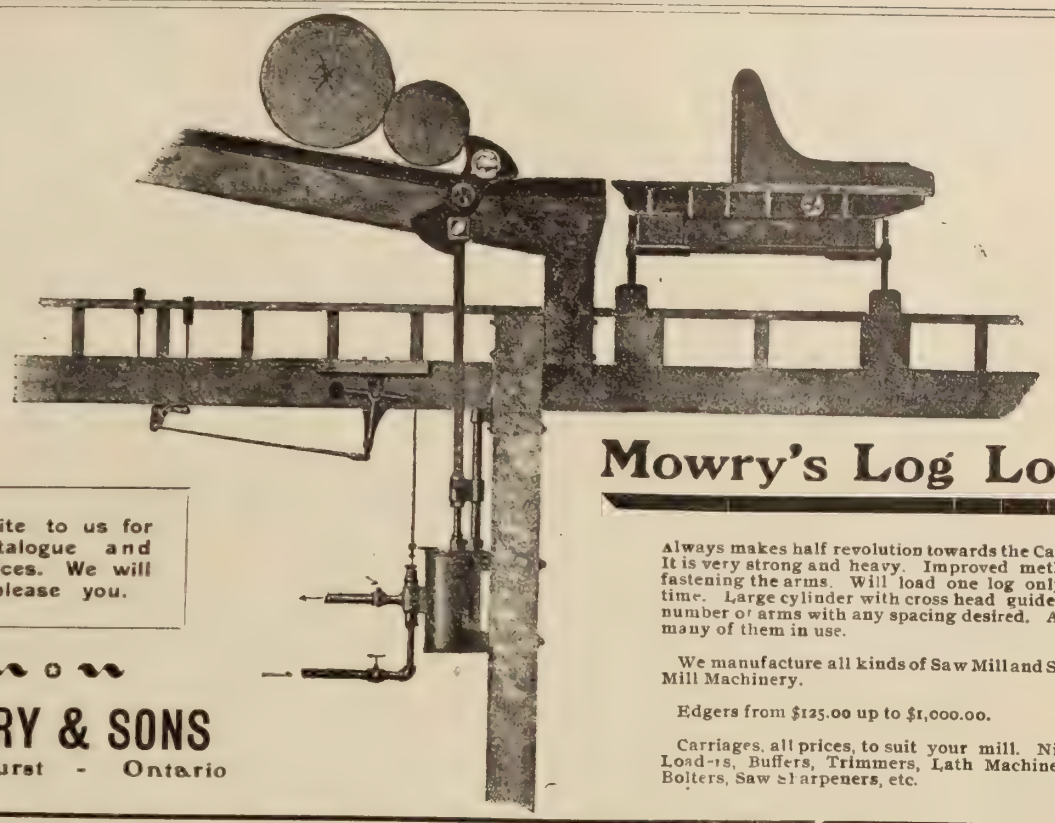

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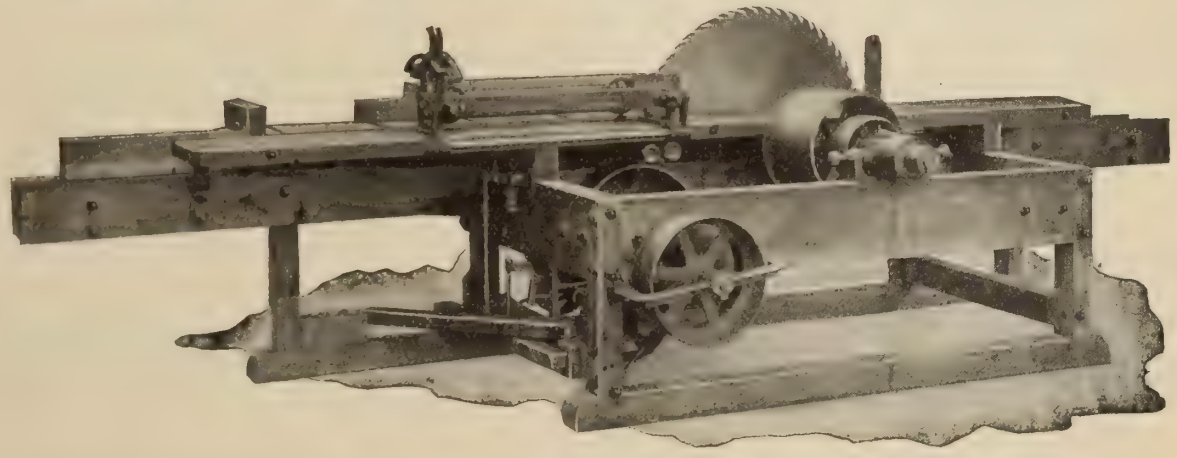

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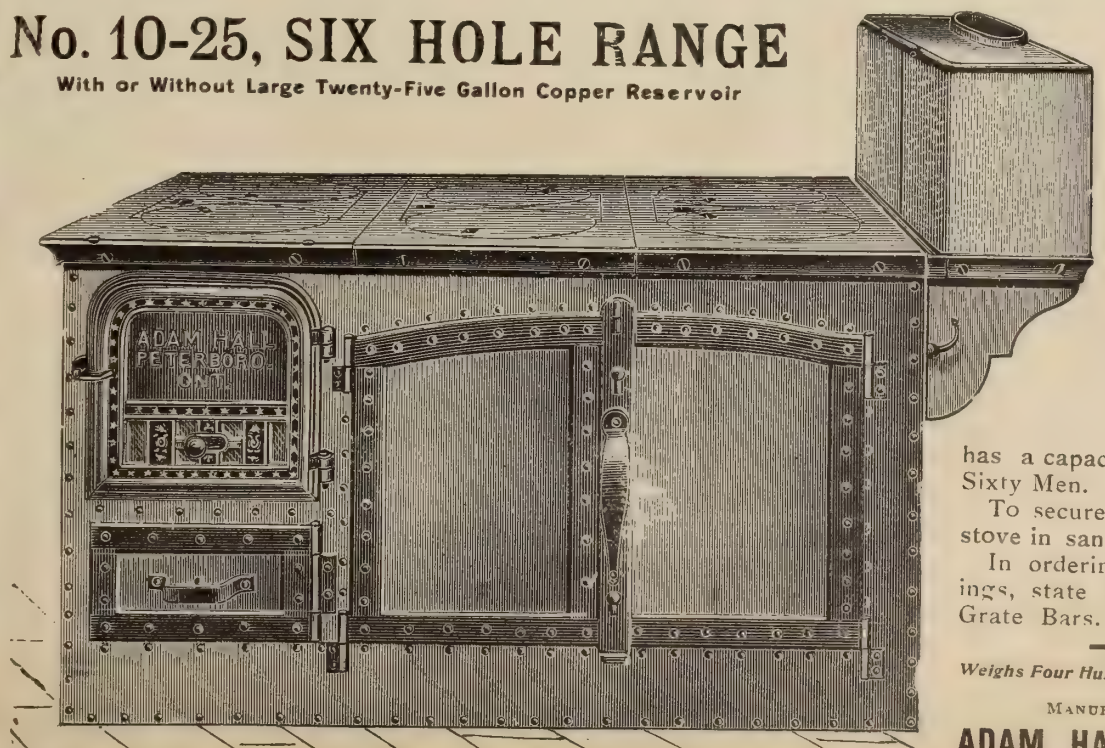

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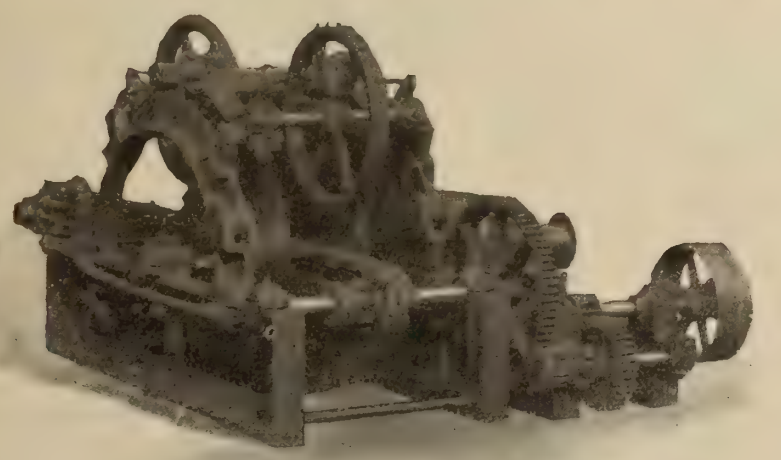

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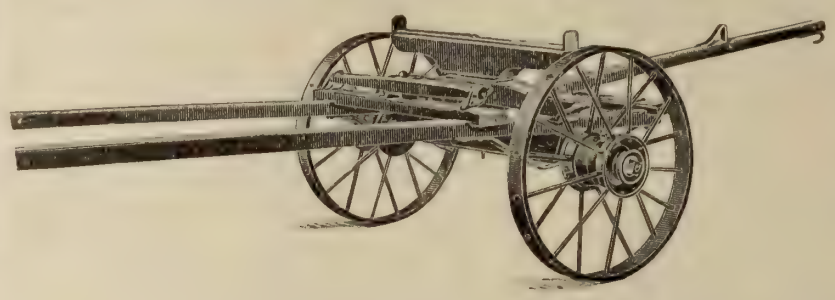

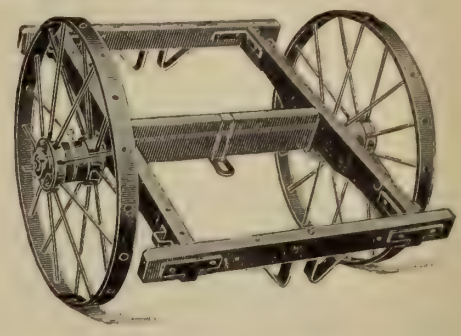

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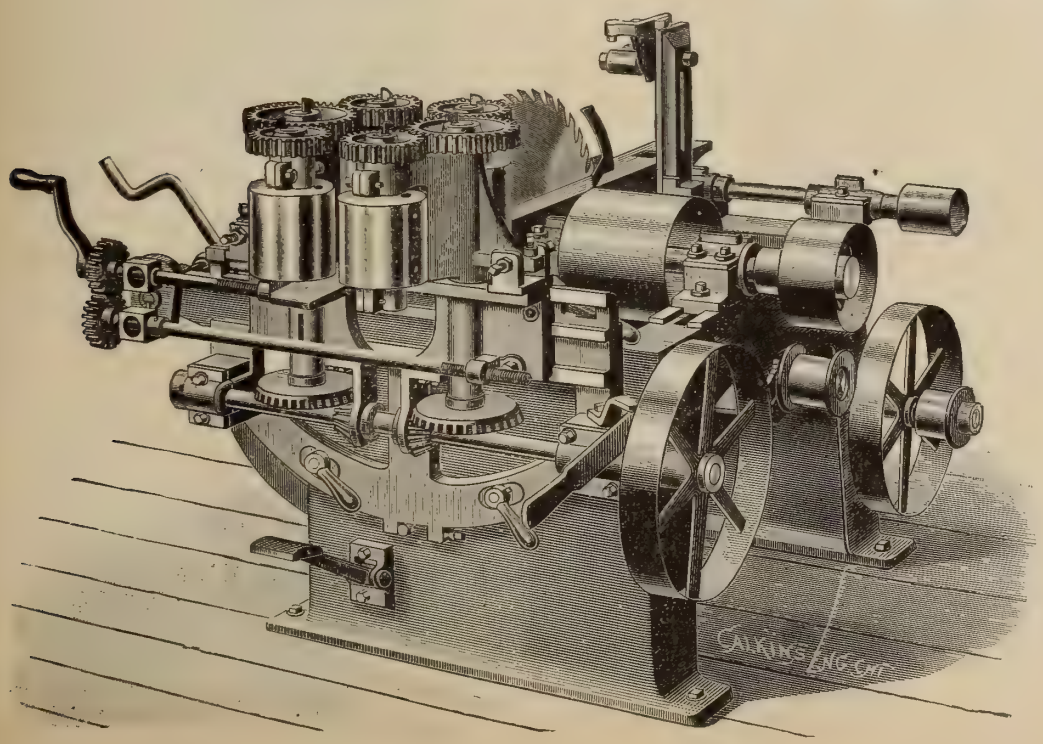

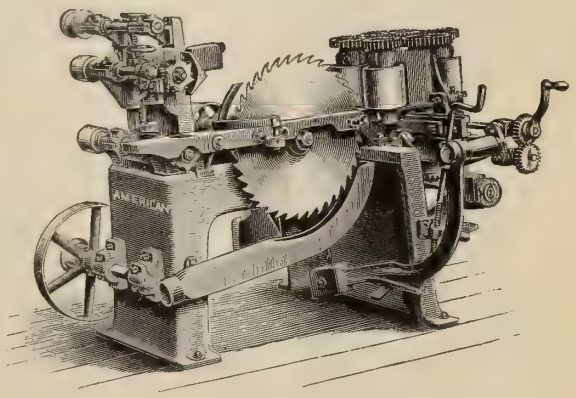

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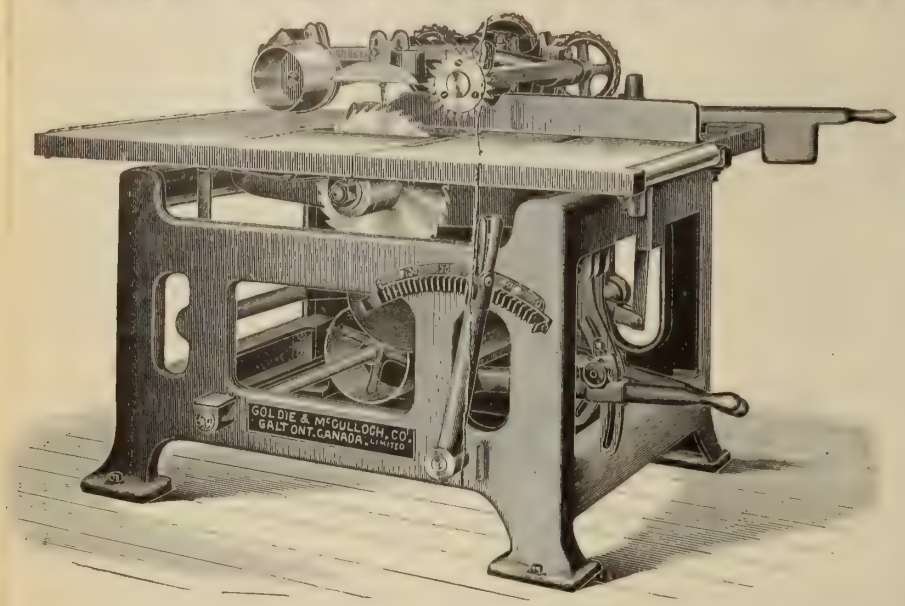

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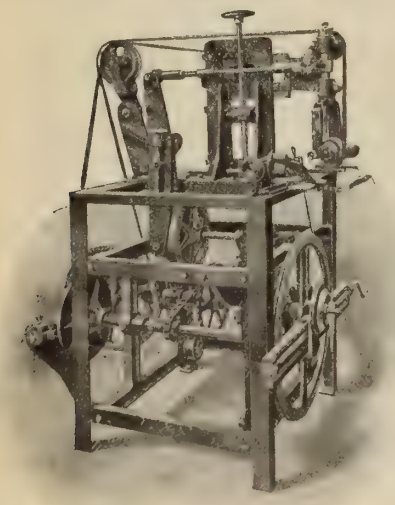

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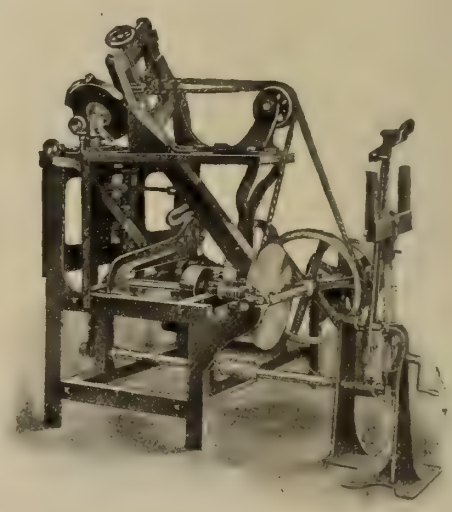

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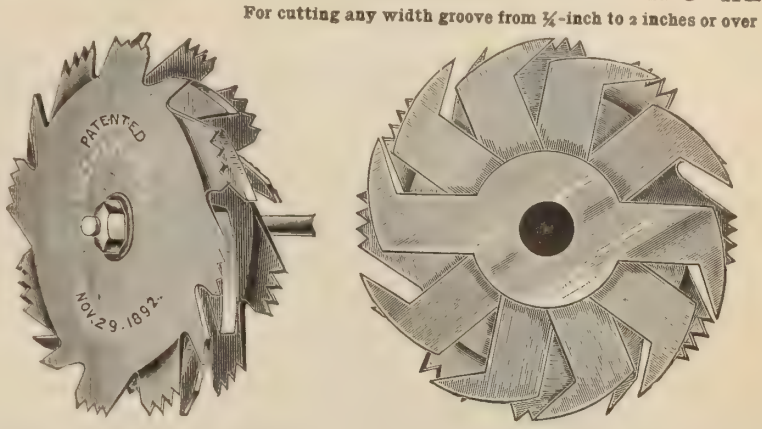

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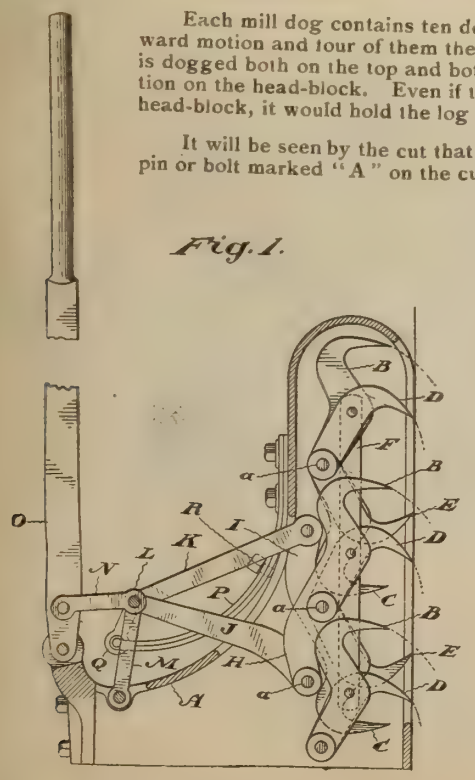
It will be seen by the cut that these ten dogs are fastened on the pivot, pin or bolt marked "A" on the cut, and connected with link bars from the principal dog to the lever "O," which operates all the dogs.

Fig. 1.



There are five of the dogs which project more than the others, about two inches from the head-block, and called the log dogs; and five which project about 5/8 inch from the head-block, and called the board dogs; but when dogging a board or a plank or a stock, all the dogs come evenly out of the head-block, about 5/8 inch, so that in dogging a board or a stock, both the log dogs and board dogs grip it, providing that the stock or board is wide enough to take all the dogs.

This patent mill dog will dog perfectly safe in all classes of timber, be it pine, hemlock or hardwood of any description, and besides it does not tear the board or stock.

Manufactured by

P. PAYETTE & COMPANY
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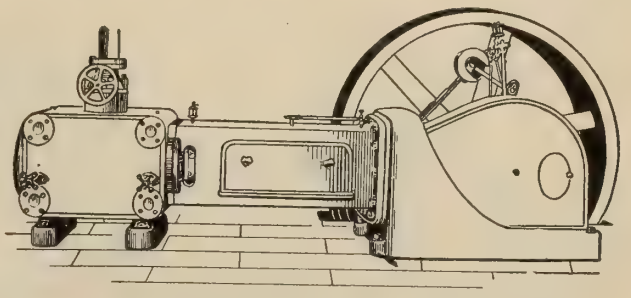

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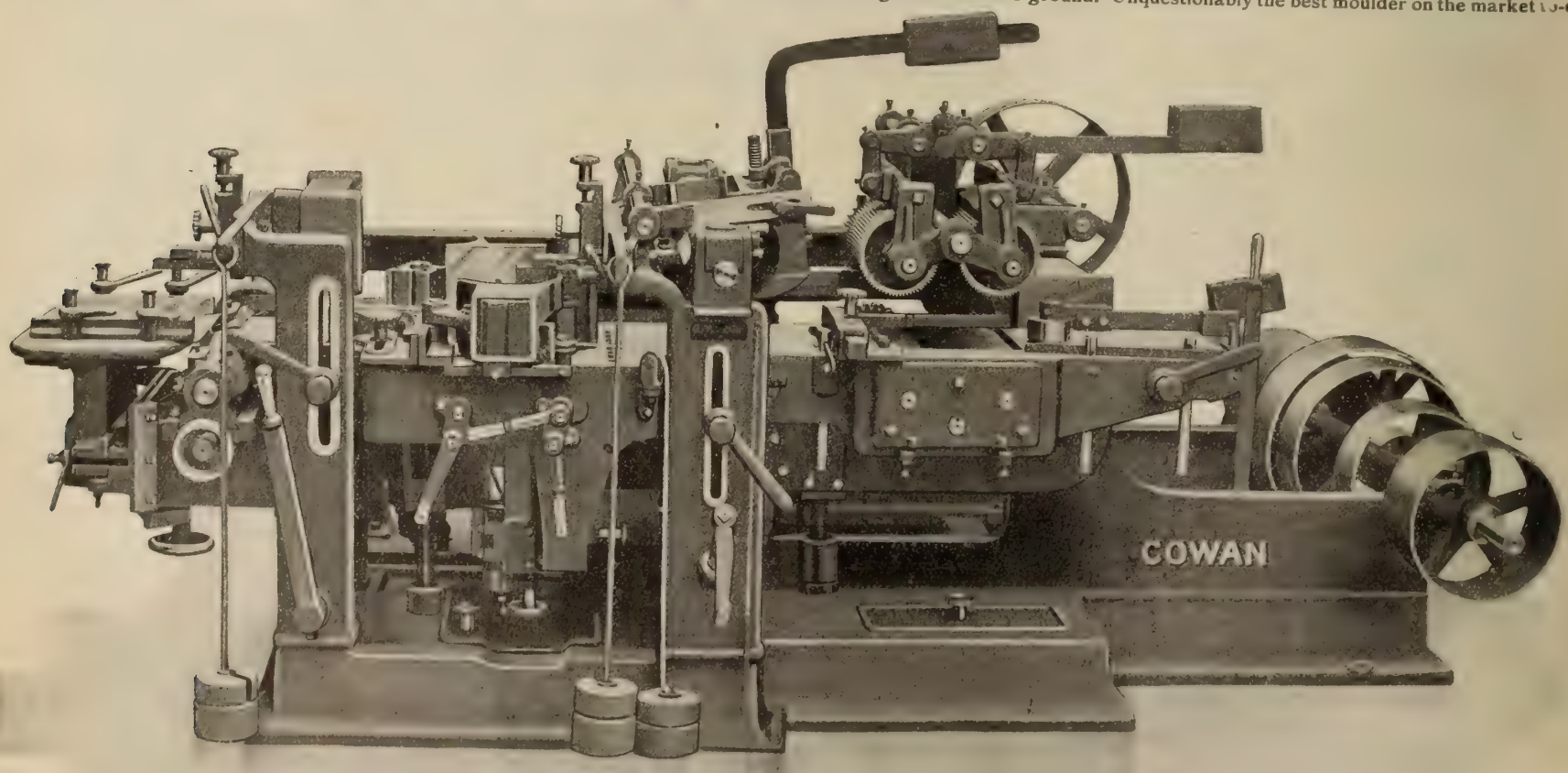

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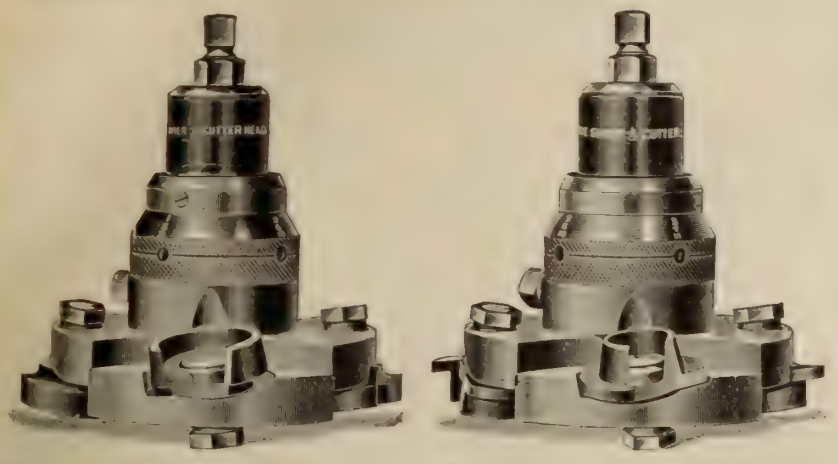

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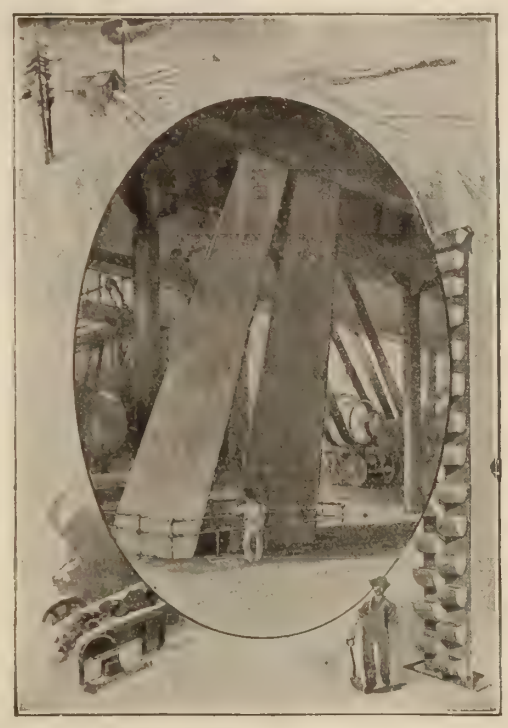

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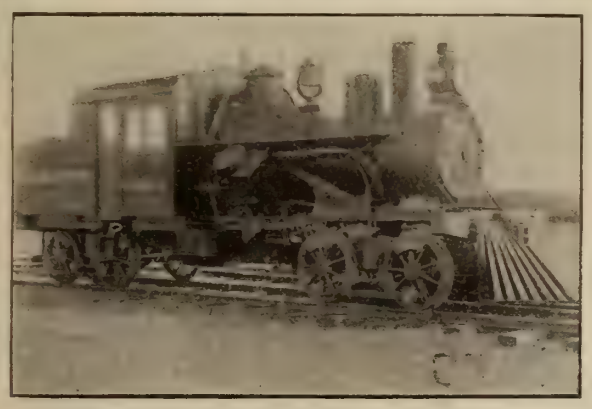

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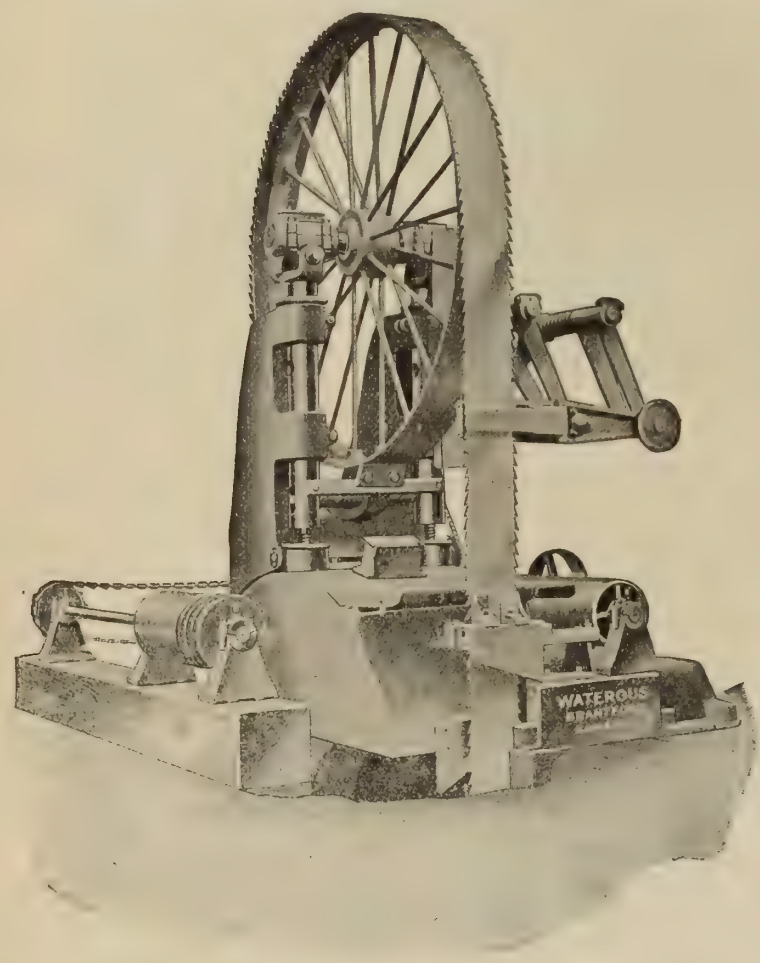

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Uses 8" Double Cutting 34 ft. Saws

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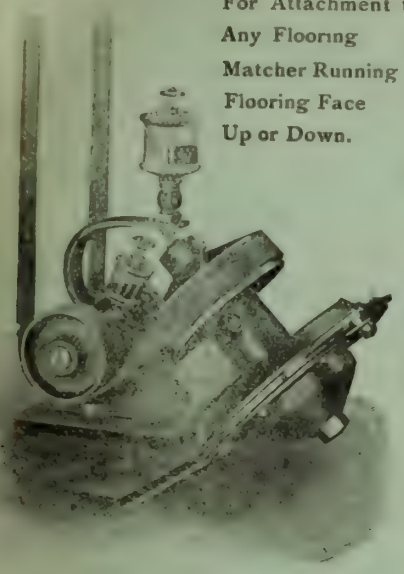
For Attachment to Any Flooring Matcher Running Flooring Face Up or Down.



Above cut shows machine boring flooring run face up. Our boring machines have been on the market for the past ten years and are well known to be the best machines on the market for their purpose. Since fast-feed matchers have come into use, it may be said that they are the only boring machines that can be used as an attachment. They require no floor space and there is no extra cost for handling.

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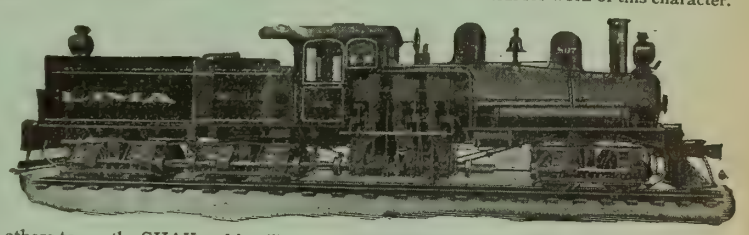

It pays others to use the SHAY and it will pay you.
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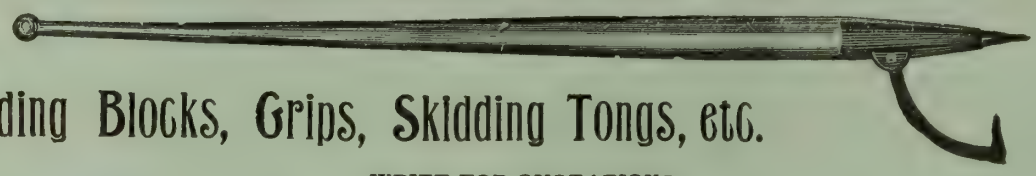

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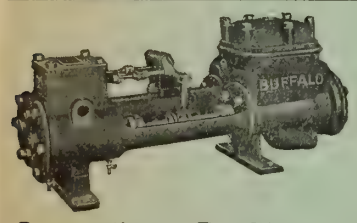

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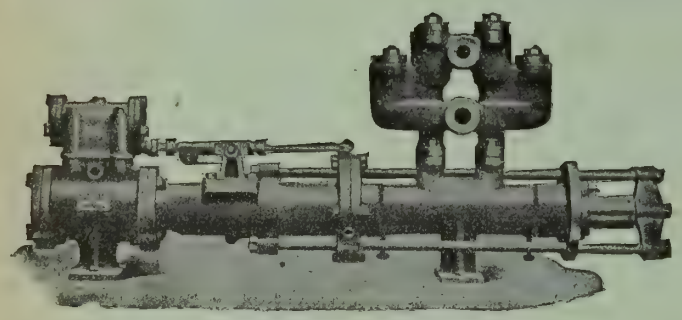

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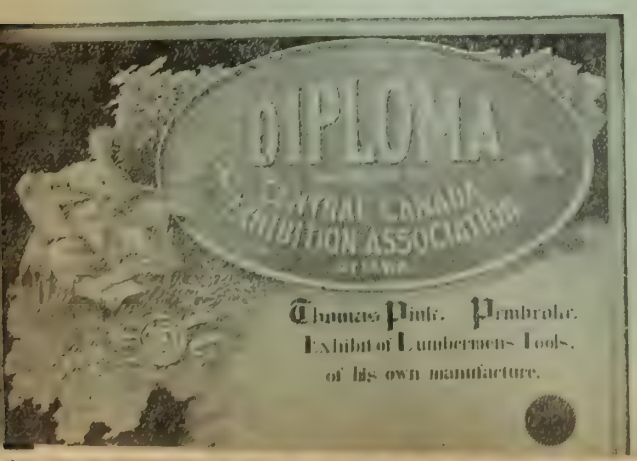

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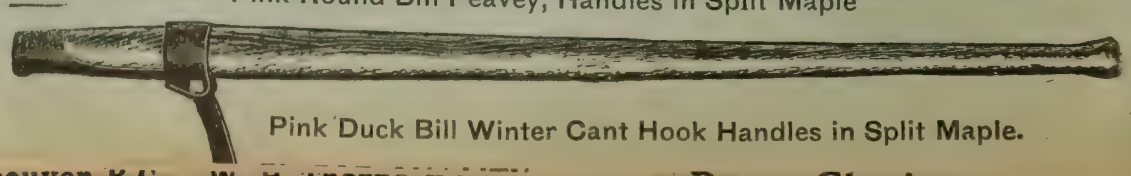

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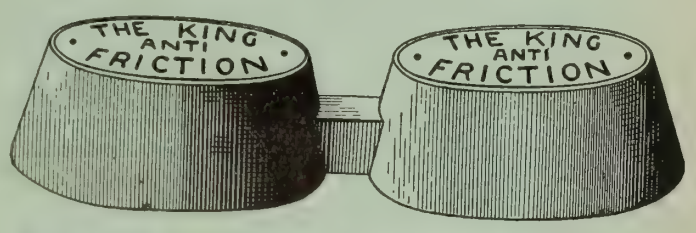

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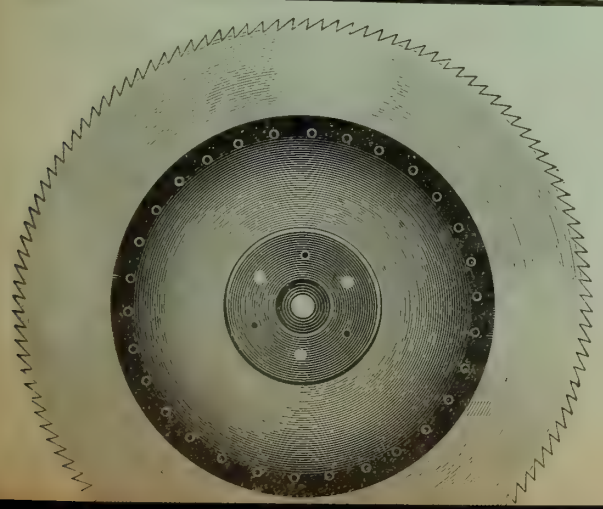

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MANUFACTURERS OF HIGH-GRADE
CIRCULAR AND LONG SAWS
UNEXCELLED
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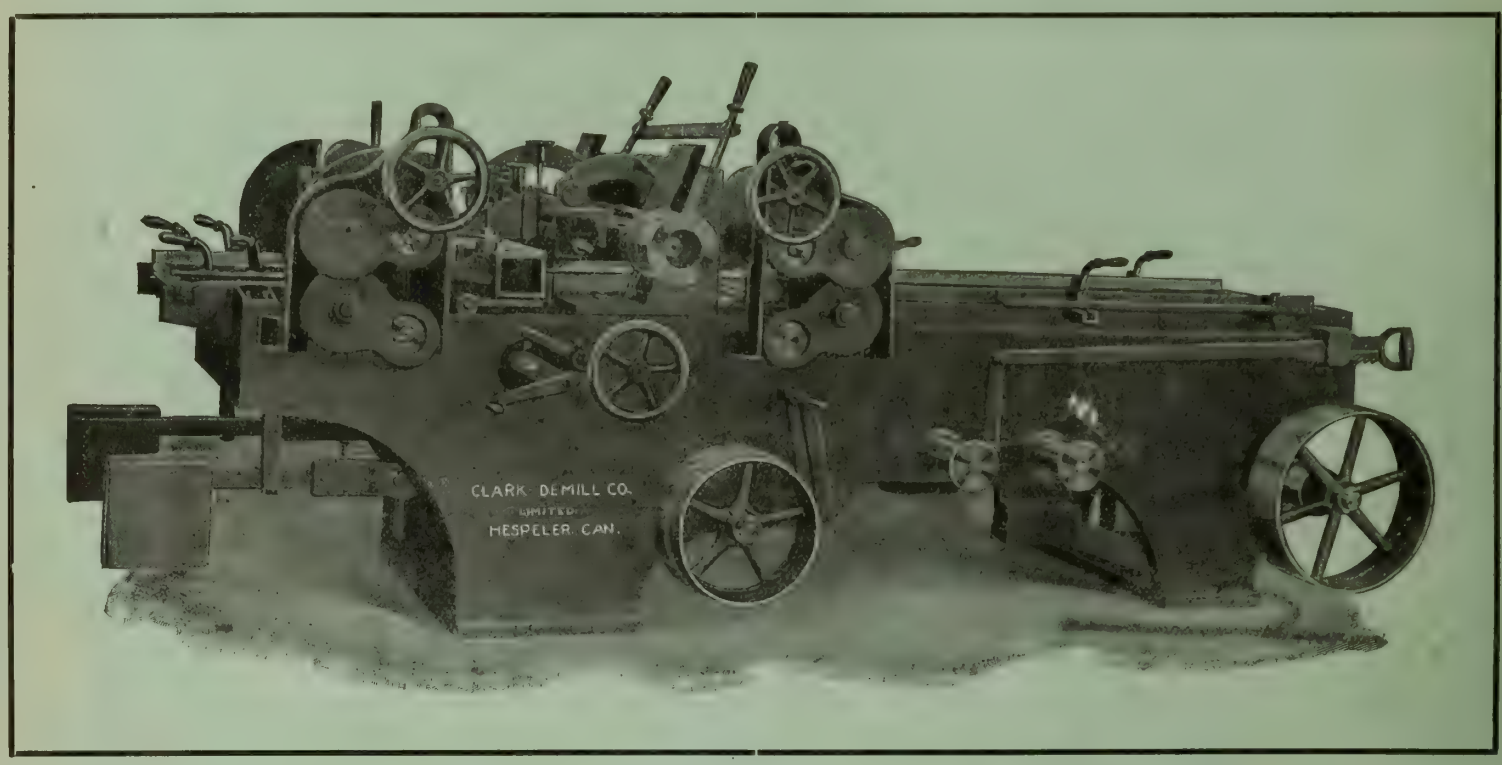
New Factory New Designs and Patterns Excellent Shipping Facilities
and All Departments under the Supervision of the Principals of Our Firm



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PLANER AND MATCHER, SINGLE SURFACER

24 in. x 7 in.

We Also Make this Machine with Double Cylinders

Consult Your Own Interests First, Last and All the Time. Our Motto: First Quality, Right I

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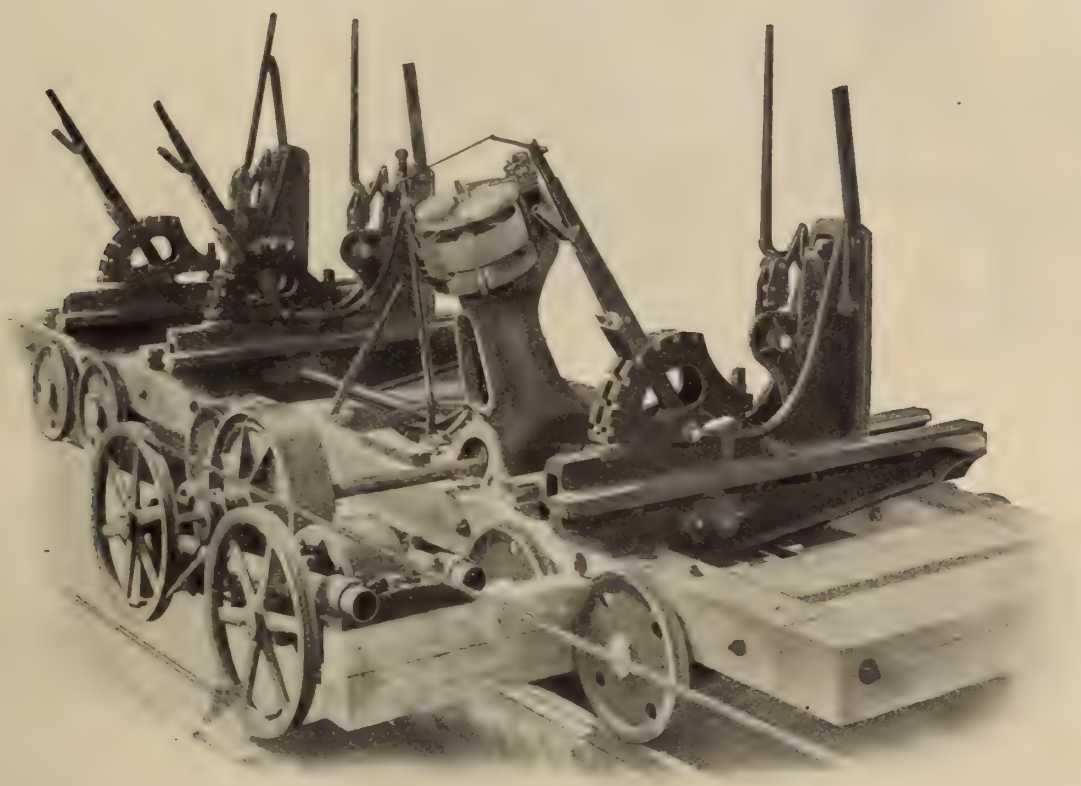

TROUT POWER SET WORKS

This is a view of the TROUT POWER SET WORKS applied to rack and pinion blocks. At the top of the set works is a dial carried on a bearing at the top of the controller shaft. It turns freely on this bearing but is connected with the shaft by means of an internal gear and pinion. The purpose of this is to operate the dial plate exactly in accordance with the movement of the knees so that the dial plate shows at all times the exact distance of the knees from the saw. Saw Mill Carriages and Accessory Machinery are fully described in Catalogue 123.

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We build the "Lidgerwood" engines for logging purposes, for mines, quarries, railway and bridge building, pile driving and general contracting.

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Dynamos, Motors, Switchboards and Transformers. Complete Electric Light and Power Plants built and installed.

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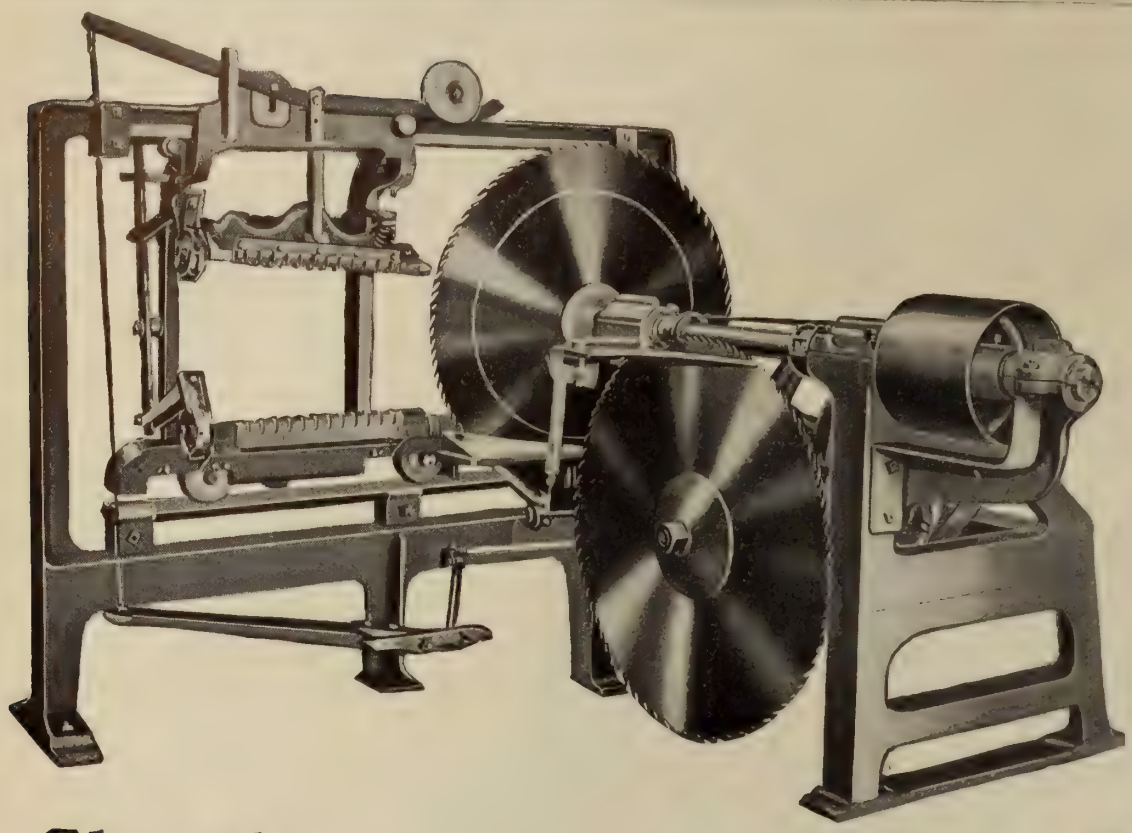


Iron Frame "Simplex" Shingle Machine

IN this, our latest design of Shingle Machine, we have incorporated all the advantages contained in our wood frame "Simplex" and added several improvements.

The arbor has been made heavier and a third bearing added to support it outside the driving pulley. The method of putting lead in the saw arbor has been greatly improved. This is now done by swinging on a center directly under the saw the whole frame which carries the arbor. Thus the alignment of the bearings is not in any way affected and there will be no danger of hot bearings after the lead had been changed. The change may be made while the machine is running and without stopping the carriage.

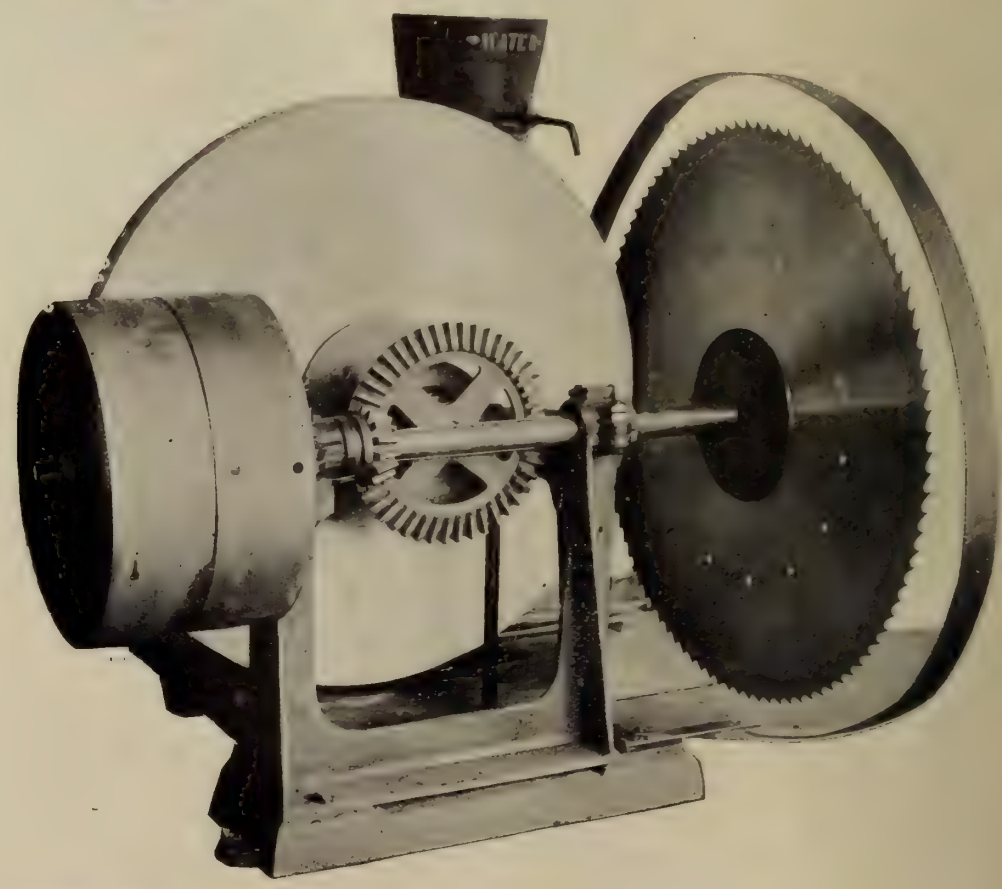
An inprovement has also been made in the method of driving the edger. It is belted direct from a shaft running at right angles to the main arbor from which it is driven by means of a bevel friction. This makes a very neat, compact drive and has proved satisfactory in the mill.

The rail on which the carriage travel is made of square steel and when worn can be renewed by simply turning upside down.

Over three hundred of our Upright Machines (Wood and Iron Frames) are in use in British Columbia and Washington.

Shingle Saw Grinder

FOR keeping down the thickness of shingle saws and thereby saving timber, we are now putting on the market a grinding machine. It will at once be seen that we have made a radical change from anything at present on the market for this purpose. The saws are ground much quicker with the grindstone than with the emery wheel. It is also found that the grindstone does not roll the saws out of shape as the emery wheels do. The cut shows the machine so clearly that very little, if any, explanation is necessary. The shaft on which the saw is fastened is driven direct with the belt; the grindstone being driven with a bevel gear and pinion. The grindstone is made to move back and forth by the cam. The grindstone shaft is not at right angles to the saw shaft, but at an angle equal to the taper on the saw. This angle can be made greater or less by turning the eccentric sleeve in which one end of the shaft runs. The position of the feeding cam can be adjusted in or out by slacking up the bolts holding it and pushing it in the direction wanted. The machine is simplicity itself, and as will be seen, is built very strongly.



Simplex Shingle Packer

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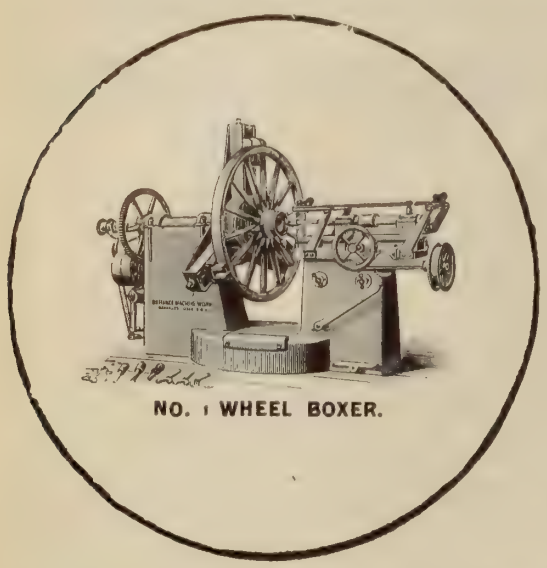
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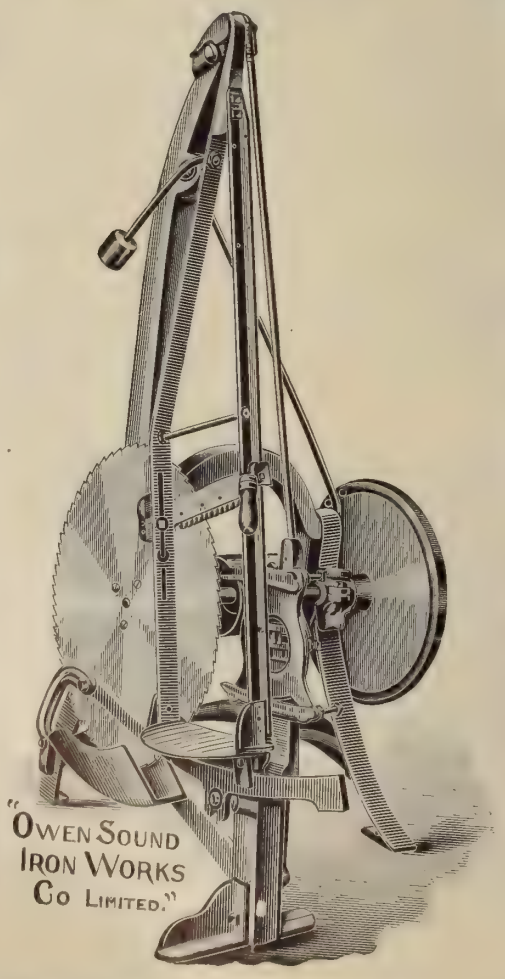

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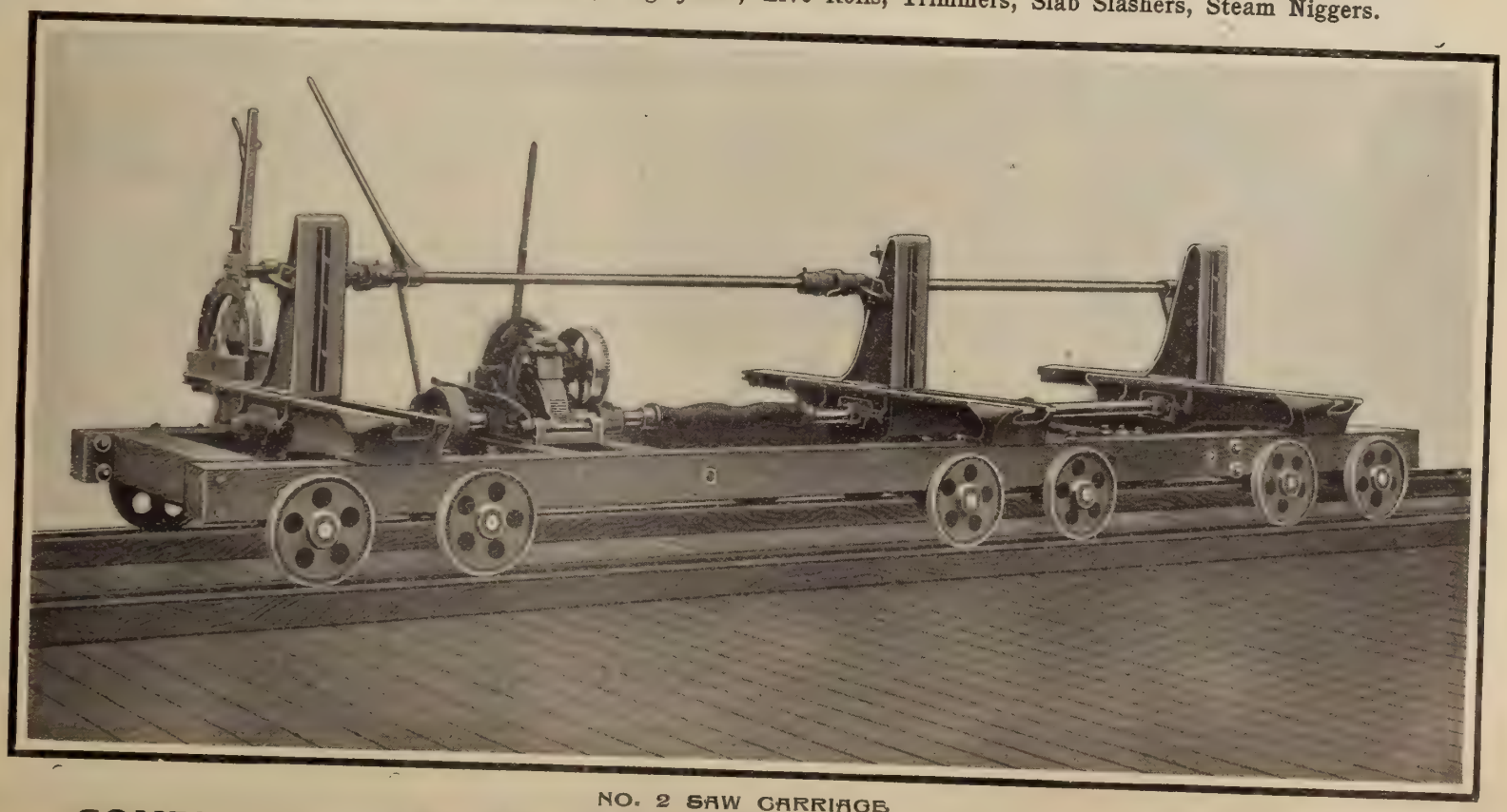

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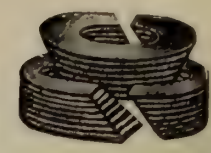

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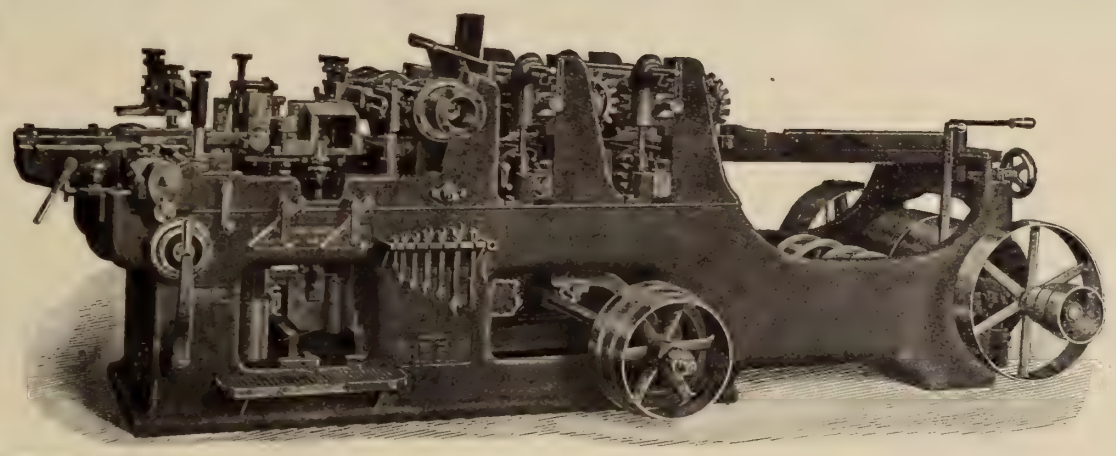

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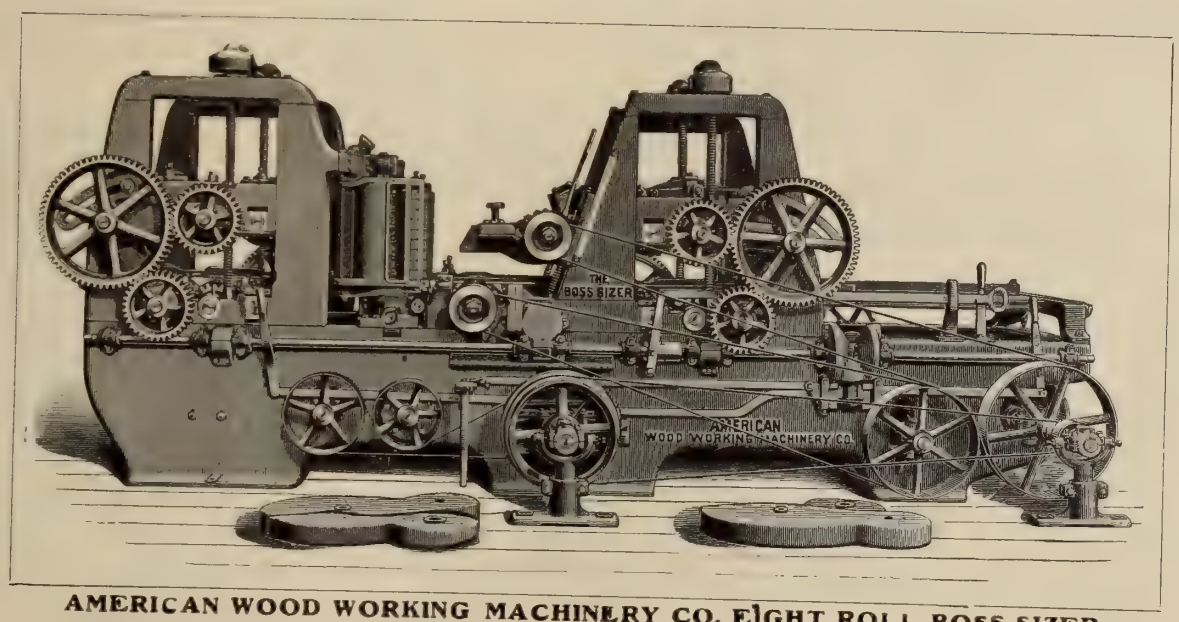

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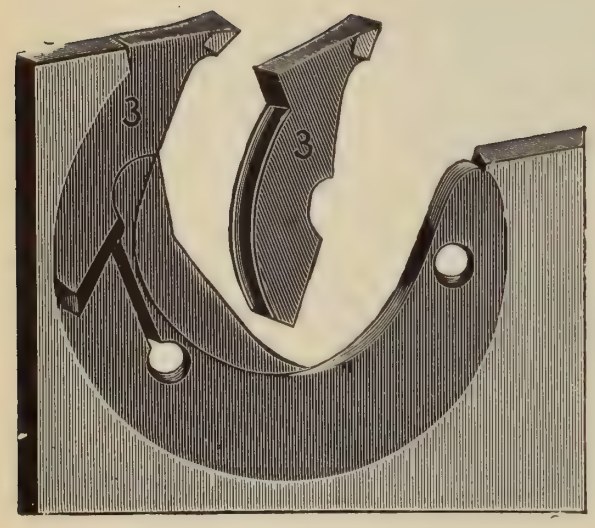

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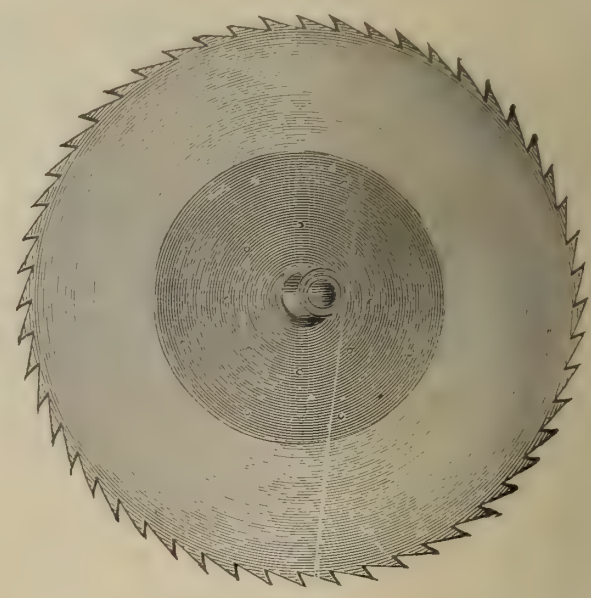

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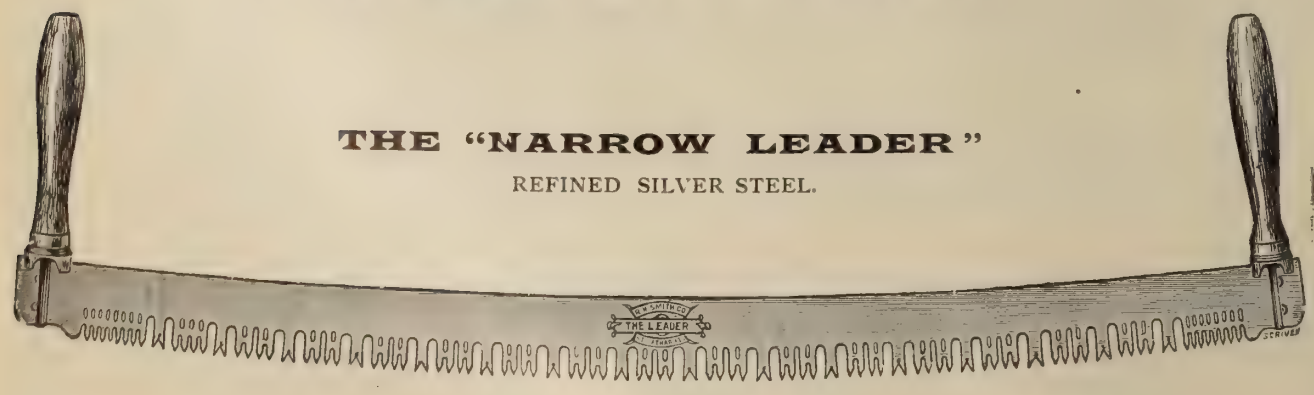

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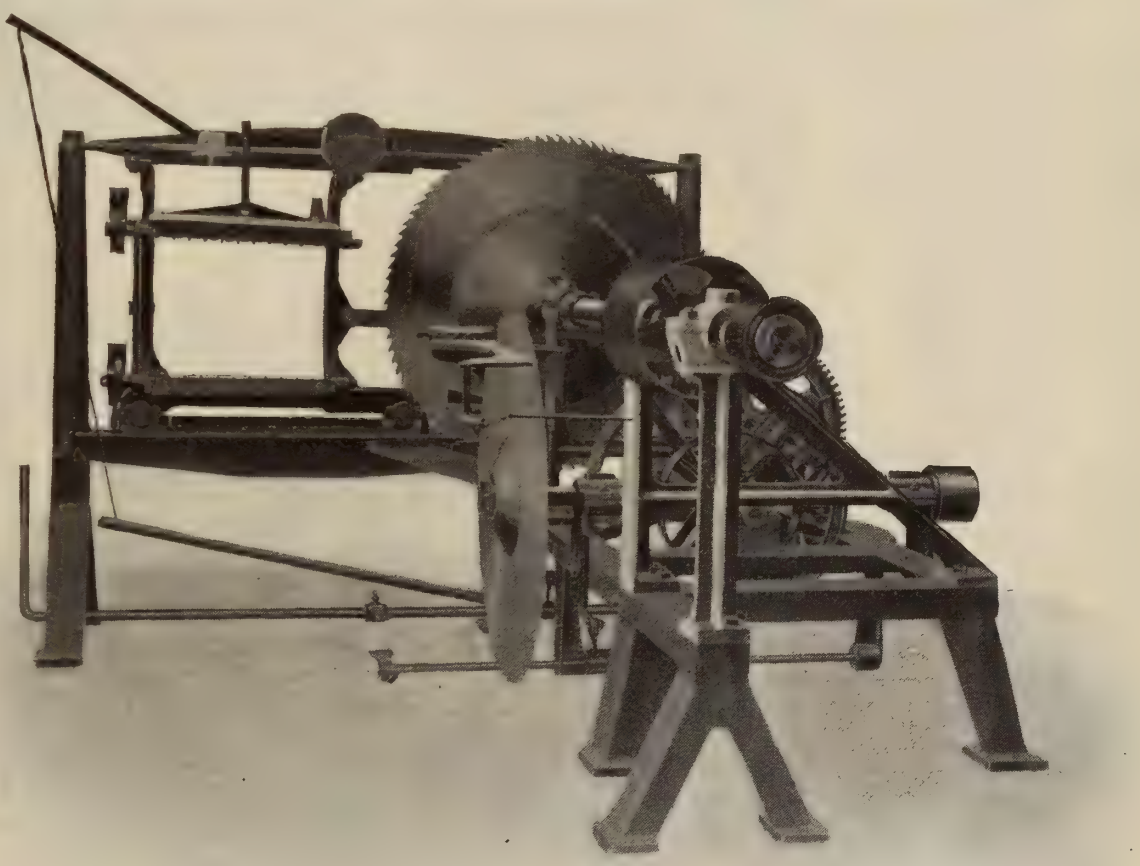

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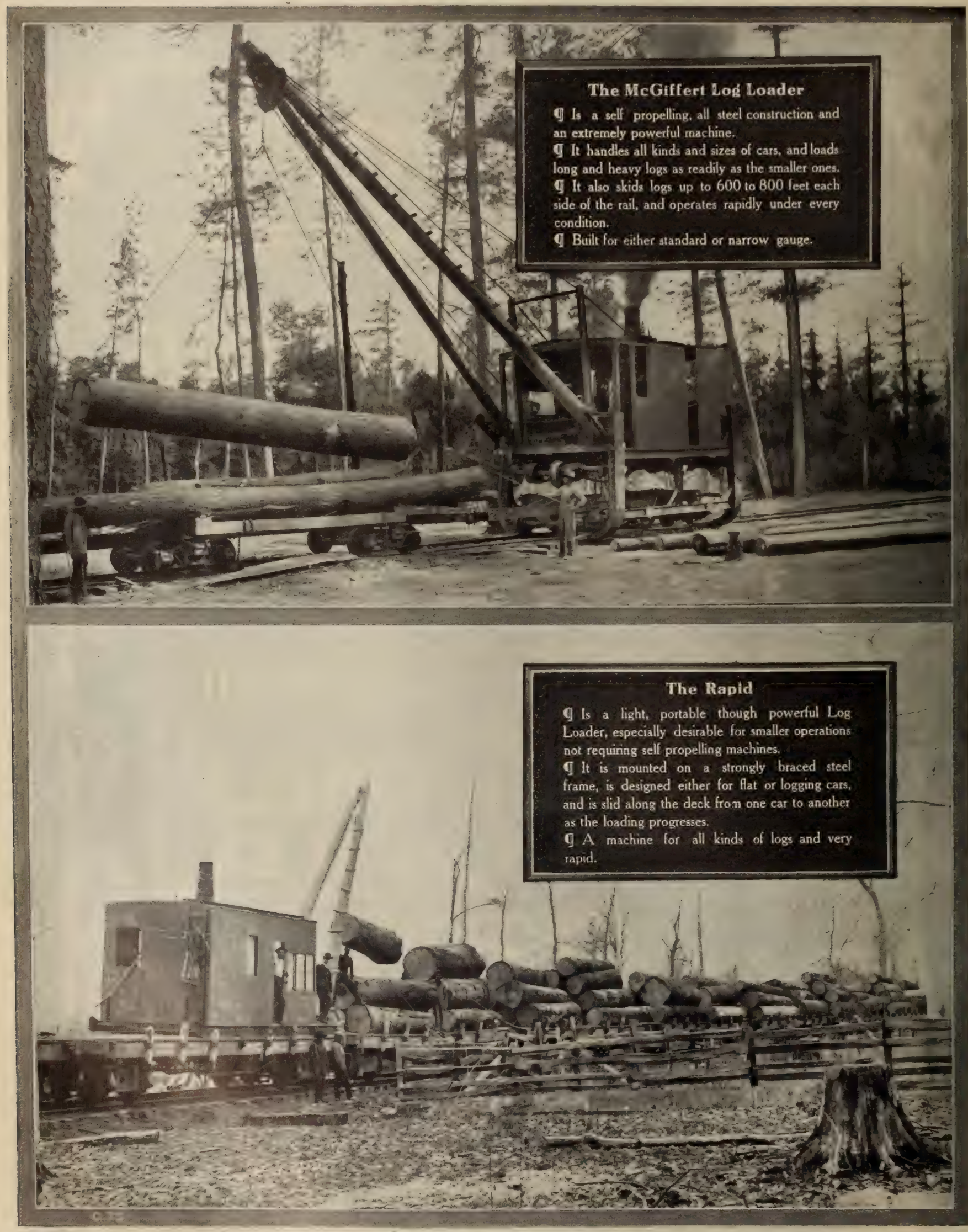
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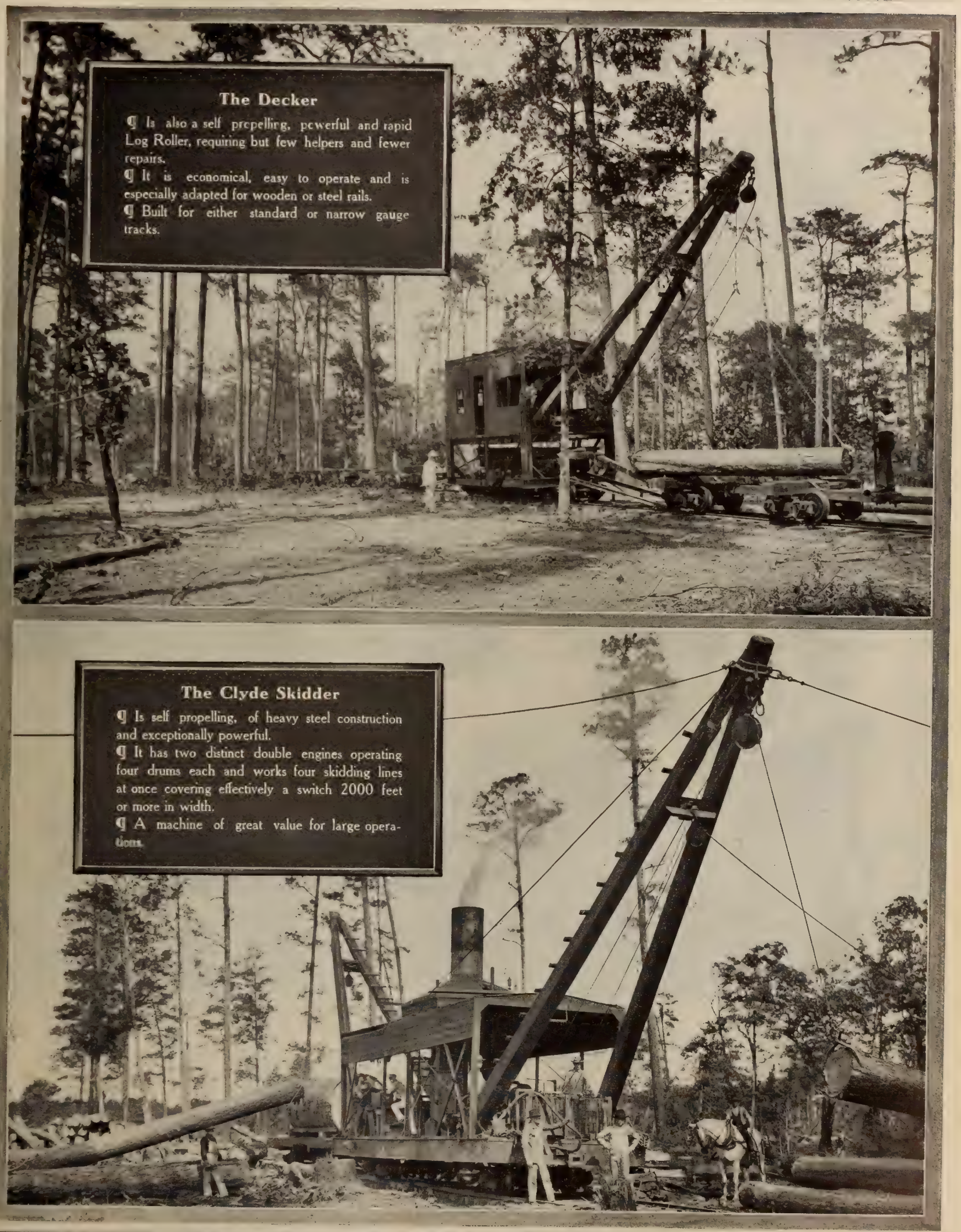
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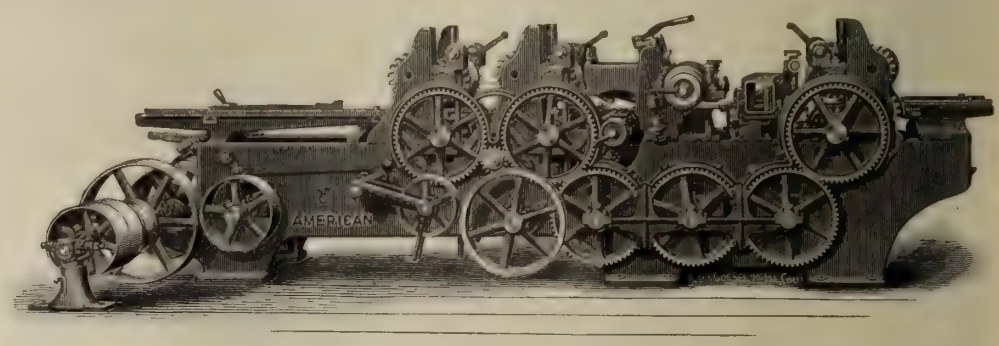

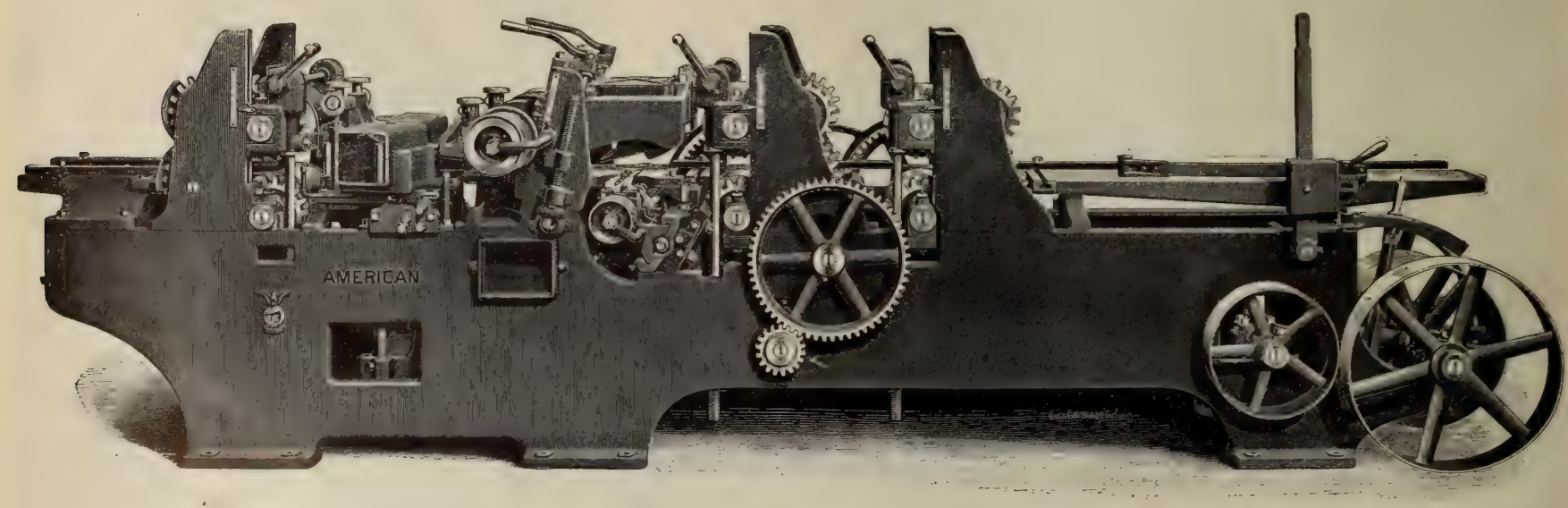

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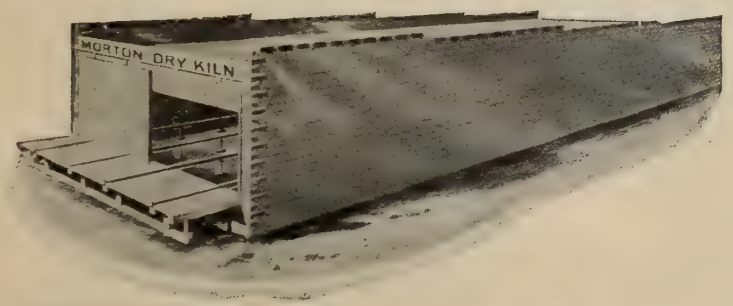

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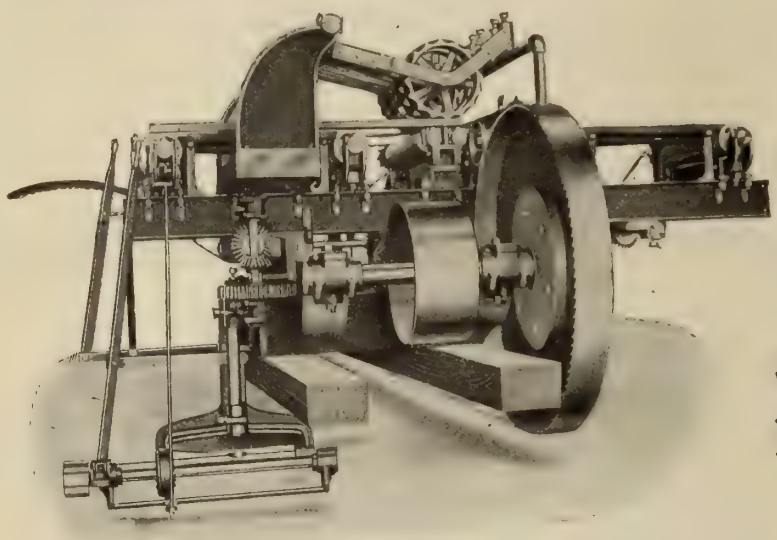

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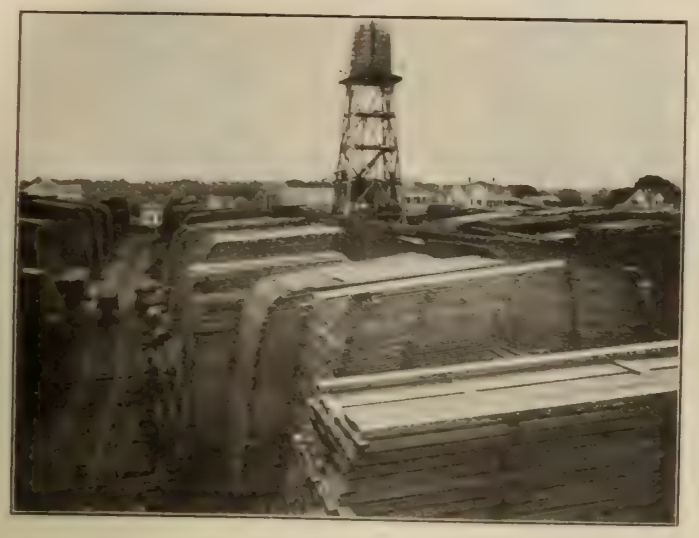

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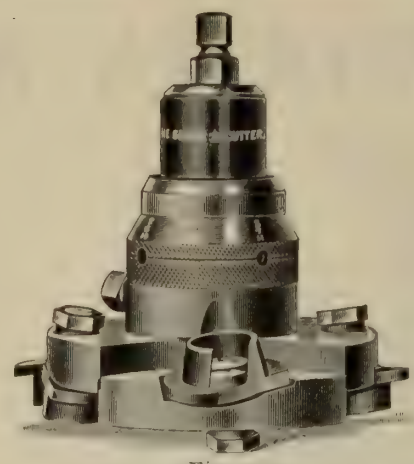

Fig. 202.

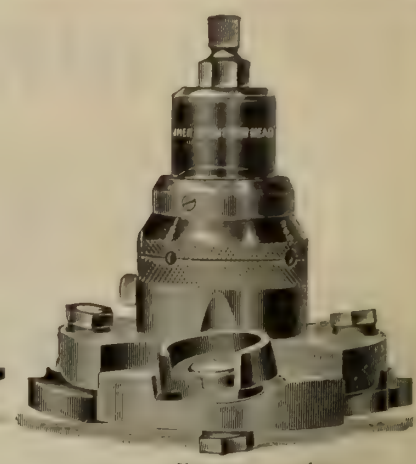

Fig. 203.

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" " 6 " " " " - - - - 37 90
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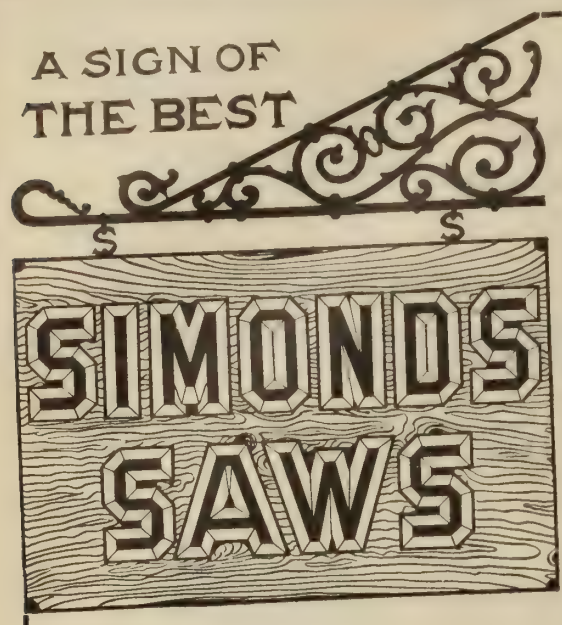

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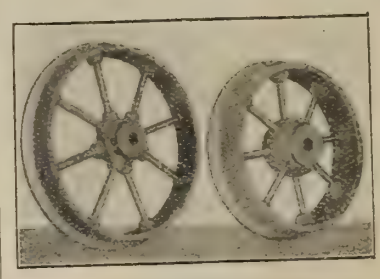

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MODERN SAW MILLS ON THE GEORGIAN BAY.

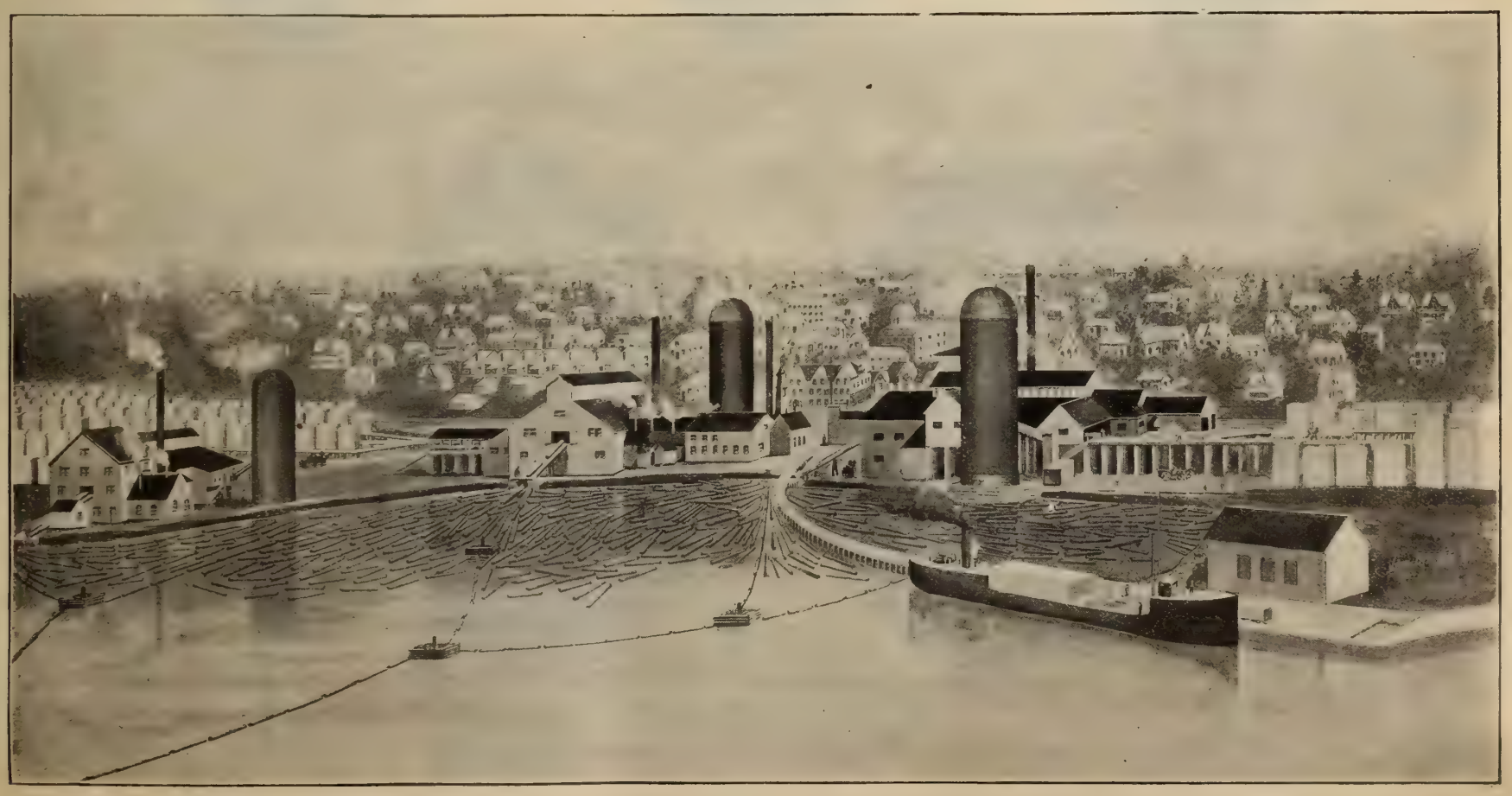
Situated on the southeastern extremity of the Georgian Bay, at Victoria Harbor, are the gigantic saw mills of The Victoria Harbor Lumber Company, Limited. We say "gigantic" advisedly, for an annual output of 50,000,000 feet undoubtedly represents a vast enterprise. There are three saw mills. The equipment includes one double-cutting and three single-cutting band saws, one circular and two gangs, together with a large timber sizer and timber boring machine. As an adjunct of the saw mills there is a dry-kiln, modern planing mill containing five large planing and matching machines, self feeding rip saws and other necessary equipment. There is to be found everything which is essential for a modern saw milling establishment, including machine shop, blacksmith shop and electric light plant, with large independent Underwriters' fire pump in separate brick building.

The shipping facilities are excellent and it is believed that better time in the loading of vessels has been made at this point than at any other mill on the Georgian Bay, with the Company using their own cars and locomotives. In 1905 the shipments totalled 51,000,000 feet.

The officers of The Victoria Harbor Lumber Company, Limited, are: President, John Waldie; Vice-President, F. N. Waldie; Secretary, W. E. Harper. The head office is at 32 Church street, Toronto.

STORE OF THE VICTORIA HARBOR LUMBER COMPANY.

OFFICE OF THE VICTORIA HARBOR LUMBER COMPANY.



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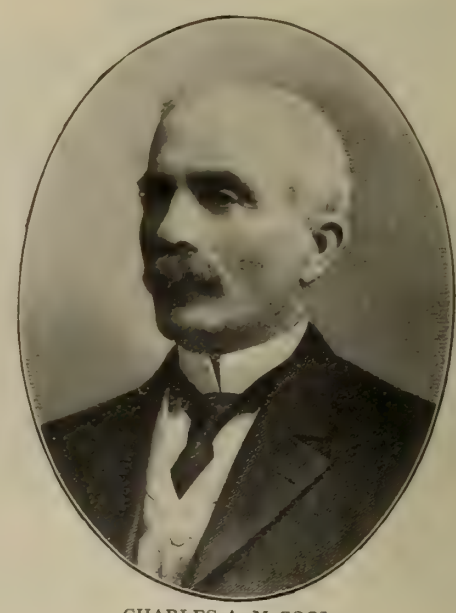

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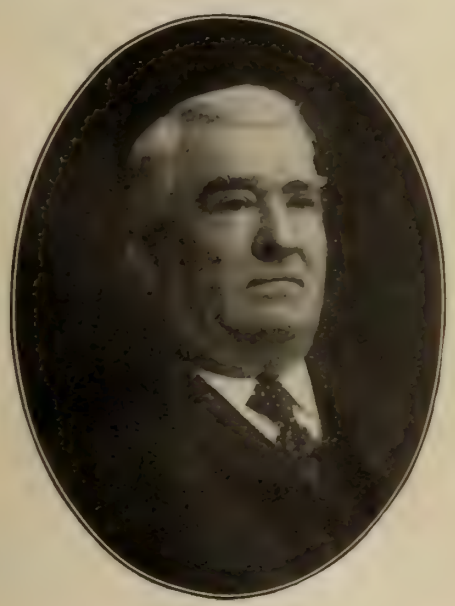

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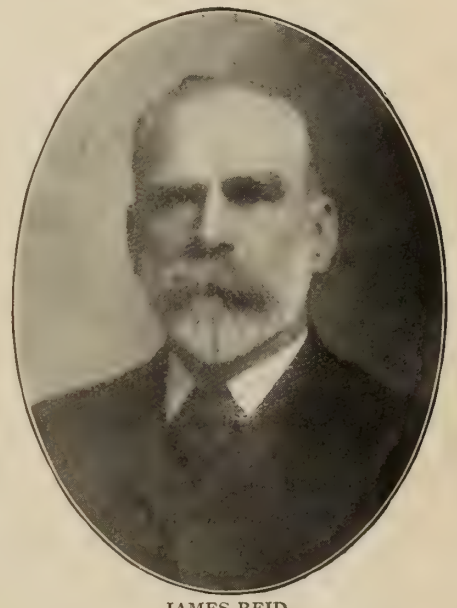

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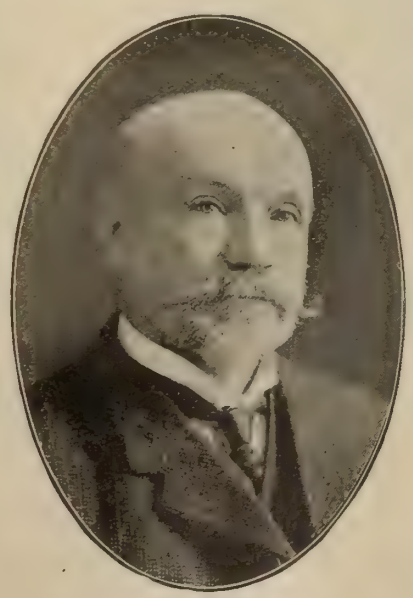

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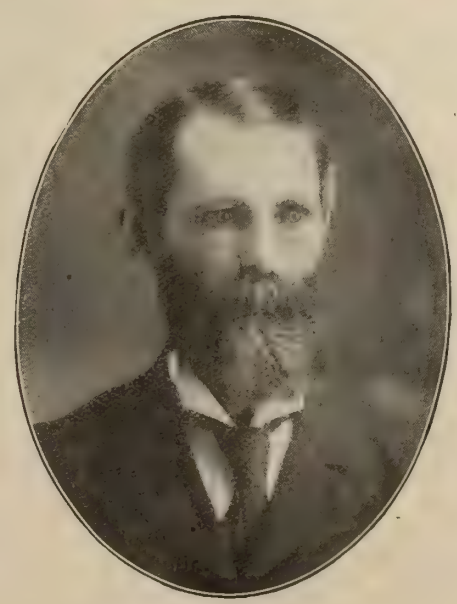

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LUMBER TRADE REPRESENTATIVES IN THE PRESENT DOMINION PARLIAMENT.

Mooswa's Mistake on the Lumber Question

By J. W. BENGOUGH.

Panting and almost exhausted, Mooswa dashed over the bold hillock and brought up trembling in the little secluded hollow, where already his neighbors of the wilds—the red deer, the wolf, the fox, the porcupine and polecat, had taken refuge after a hard run. The arrival of the lordly moose was greeted with such manifestations of joy as could be prudently made without breaking the wary silence.

"We've got clean away once more, I hope," whispered Reynard the Fox.

"My maledictions on the whole tribe of Hunters !" growled the Wolf below his breath. "But we've outwitted him this time, brothers !"

"Yes" said Mooswa, beginning to recover his wind, "they're off the trail, and we are safe at least for a short rest. But if any evil wishes of mine could bring that accursed institution, the Grand Trunk Railway System, to wreck and ruin, there wouldn't be a wheel moving on it from now henceforth and for ever !"

"You speak savagely, brother," said Stumptail the Red Deer, in a gentle whimper. "The hunters we have every reason to fear and hate, but the Grand Trunk Railway is a good fifty miles away at its nearest point. I don't quite see—"

" No, you don't see because, as we all know, you have a stupid head," bluntly answered the Moose. "Your reasoning faculties are not first rate. But you are no doubt aware that it is the Grand Trunk Railway System, with its seductive red and yellow posters, telling about the 'Sportsmen's Paradise' and offering to carry hunters for single fare, that fills our haunts each season with these blood-thirsty creatures."

"Yes," added the Polecat, "and—the hunter's gun and two hundred pounds of his murdering material carried free. I'm with you, Mooswa ; down with the Grand Trunk Railway System !"

"Yet how does it all concern you, Mr. Eau de Cologne?" said the Wolf, grinning at the last speaker. "The hunters take care to give *you* a wide berth, I fancy".

"I'm better game than *you*, old sheep-stealer, anyhow. I don't think there are many fine society ladies to be found wearing boas and muffs of wolf-skin, and passing them off for Artic Sable !" retorted the Polecat, bristling up.

"A good hit !" laughed the Fox. "But pray don't get excited, Skunky ; we really couldn't stand it, you know."

"To get back to the point, friend," whispered the Porcupine, "I would like to ask Mooswa a question, if I may".

"Well," said Mooswa, graciously, setting forward his ears and regarding the little fat Porcupine attentively.

"You seem to be very much down on Hunters, and yet I think I have heard you say more than once you wish you had been born a human biped. How is that ?"

"I think that is a very reasonable wish," replied Mooswa. "No doubt it is a great thing to be born a Moose, when one reflects that other unfortunate fellow creatures are born Porcupines, Polecats and so forth—but between Man and even the Moose family there is a great gulf. No question about it, Man's lot is the happiest on earth."

"Ah !" commented the Fox. "You would rather be the hunter than the hunted ; very sensible, too !"

"But Mooswa did not say he wished to be a hunter ; he said a man, which is not quite the same thing," remarked Stumptail.

"The very opposite, I should say," growled the Wolf.

"Well, since we are speaking of the Human racé, what class of men do you regard as the

"JOLLY TIMES IN THE SHANTY."

most fortunate and happy ?" asked the Porcupine.

"Oh ! without doubt the lumbermen," promptly answered Mooswa. "Above all things, I would choose to be a Lumberman !"

"Er—indeed ? I would scarcely have thought that," said little Porcy. "I have often watched the Lumbermen at their work in the forests and on the rivers, and it has seemed to me that theirs was a decidedly rough and unpleasant occupation, to say nothing of its being full of danger".

"But you have heard them singing merrily at their work, haven't you ?" put in the Red Deer.

"And no wonder", added the Polecat ; "just look at the wages they get !"

"And the grub they feast upon in the Shanties !" added the Fox, licking his chops at the memory of the sniffs he had often got while skulking around the cooks' quarters.

"And the jolly tunes they have with their pipes and fiddles in the winter nights when they gather about the big stove before turning into their snug berths," remarked the Deer, again.

"All true enough," said Mooswa, "and I agree with you that the Shanty man is an enviable mortal compared to any of us, bu when I said Lumberman, I didn't exactly mean the laborer. I had reference to the Boss, the man who owns the mills and holds the timber limits, and enjoys the big profits of the business : that's the Lumberman I mean.

Hum !" said the Red Deer, doubtfully. Mooswa pricked up his ears, and looked enquiringly at Stumptail.

"Do you mean that," said he, "for a dissent from my view of the Lumberman's lot ?"

"Something in that way—yes", answered the Deer. "I am not so sure that his lot is, as they say, 'all beer and skittles'. I have often been told, indeed, that human experiences are, on the whole, as full of troubles as our own."

"But I tell you the Lumberman is an exception to that rule," said Mooswa, with assurance. If you know anything of the subject you must know that they are enjoying unexampled prosperity in this country at present—with a constant and growing demand for their product at the top prices. What more could you ask for ?

"Hear, hear !" said the Fox, "that knocks you, Mr. Stumptail."

"Perhaps so, but there are other considerations that knock the lumberman too," replied Stumptail with spirit.

"Let us have some particulars, if you can," said Mooswa, a little gruffly. When a man has nothing to do but take in money and count

THE LUMBERMAN—IDEALIZED.

up his profits, I don't see how his lot could be much improved—since money means ease and happiness."

"But," said Stumptail, "it happens that the Lumbermen have several other things to do, as you may easily learn by enquiring into the subject."

"I told you to come down to particulars," said Mooswa, curtly. "Let us have the results

of your profound knowledge of details, since you set yourself up as an authority."

"Nay, brother Mooswa, I made no claim to knowledge except such as is within the easy reach of any animal of ordinary intelligence," replied the Deer in a conciliatory tone.

"Do you mean to assert that the Lumbermen are not doing well? Is that what you insinuate?" demanded the Moose.

"No," replied Stumptail; "what I say is that their profits are not so great as you might suppose, and the business is full of difficulties and anxieties; it is not the bed of roses you seem to imagine."

"Indeed!" said Mooswa shortly. "I suppose you know that a few years ago Lumbermen in this country were so anxious to find an outlet for their product that they would

THE LUMBERMAN—IN FACT.

send carloads of lumber anywhere to be sold on commission, and very often at the risk of losing it through the sharp practice of these unknown agents."

"Yes, I have heard they often did such things when times were hard," admitted Stumptail.

"Well, don't you think the fact that they don't do such business now—because they don't have to—means a good deal?" said Mooswa.

"Undoubtedly it means that times are better. That is a well-known fact. I have already admitted that there is an active demand at good prices," replied Stumptail.

"Which means good profits, I should suppose!" commented Mooswa, looking round triumphantly.

There was a murmur of applause from the listeners.

"Fair profits, no doubt, considering everything," admitted Stumptail.

"What do you mean by 'everything'?" demanded the Moose.

"Well, I will mention a few things," said the Deer. "In the first place a Lumberman has to get a berth, as it is called. He has to buy this at a Government auction, with an auctioneer like Peter Ryan in charge of the sale. You've heard of Peter, I suppose?"

"Yes, often," said Mooswa.

"We've all heard of Peter the Great!" said the animals in a chorus.

"Well, then, you know that nowadays there are no snaps to be had. Peter Ryan gets the biggest bids that are to be got, and so it comes that the average bonus price for a limit is much greater than it used to be. In 1880, and around there, they sold limits for a bonus of about $500 per square mile; a short time ago one of the Ottawa valley operators paid over $30,000 per mile. Now, I suppose you understand that this bonus only gives the Lumberman the right to go on the land; it just gives him the right to pay stumpage dues and ground rent, and both these items have been about doubled in amount lately. All this means a remarkable increase in the cost of standing timber, and has a plain enough bearing on profits, I should say."

"Go on," said Mooswa, evidently impressed. "The cut of logs this season is likely to be as good as the average, anyway, isn't it?"

"That is the general belief," replied Stumptail, "but it depends, of course—"

"Depends on what?" asked Mooswa snappishly.

"Well, the weather for one thing. There may be not enough snow, or there may be too much. That is one of the items always in the Lumberman's happy lot, you know."

"The weather—yes; and what else?"

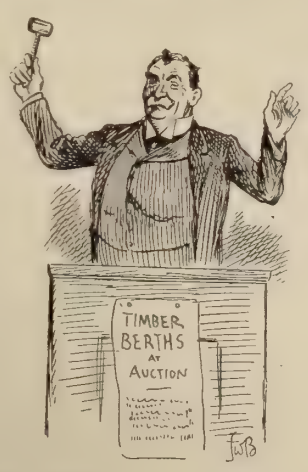
"The supply of labor," said Stumptail, emphatically. "That is another of the items, and about the most aggravating of all."

"What!" interposed the Fox; "trouble with labor, notwithstanding big wages, choice grub and pipes and fiiddles,and all that?"

"Yes," said Stumptail, feelingly, "it is the biggest problem in the Lumberman's business. Somehow they can't get as good and sure a supply of shantymen as in former years, and notwithstanding the higher wages, the class of workers to be got is not so good as in times past."

"Hum!" commented Mooswa. "Anything else?"

"A good deal else, Brother Mooswa," replied the Deer. "Not only are wages at a



"EVERYBODY KNOWS PETER RYAN."

point the highest they have reached for years, but provisions are dearer than they ever were before. Pork for the men and hay for the horses are at almost prohibitive prices, while there has been a rise all along the line of provisions. In short it costs more to produce lumber than it used to, ever so much!"

"But lumber commands a higher price than ever,—don't forget that," said Mooswa.

"True; but that does not mean more profit to the Lumberman. I fancy I have shown you that this clan of human beings have a few things to do besides counting their profits. In fact, the increased cost of production consumes the advance in price."

"That may all be," said Mooswa, in a doubtful tone, "but there's one thing I know there has been a rise in the price of hemlock beyond any increased cost."

"Hemlock!" cried Stumptail, looking much astonished. "Why in any case, being of the cheaper class of lumber, the profit on it is never great, as the cost of production is as high as that of the superior grades, besides which at present prices it scarcely pays to handle it at all, unless the operation happens

"THE JUMPER."

to be close enough to a railway to ship the tan-bark easily, and—unless another thing—he can get men to do the peeling. Here you come up against the labor problem again, you see! I suppose you have heard of the Jumpers?

"Do you mean the bull-frogs, or the Kangaroos?

"No," replied Stumptail; "nor yet the Fleas-lumber-shanty jumpers; shantymen of shifty roving disposition who jump their job without a moment's warning and for no particular reason, just when they are most needed, it may be. They have no fault to find with wages, grub or anything else, but just seem to act this way through pure cussedness. If you could tell the Lumbermen how to get over this source of trouble you would really help to make their lot as happy as you seem to think it. Just give them a method of keeping their workmen and securing a decent day's work for a generous day's pay."

"Ah!" grunted the Porcupine who had listened attentively to this long speech. "This seems to put a new face on the Lumberman's ideal lot, brother Mooswa.

"I could add a few other considerations, if necessary," resumed Stumptail—"occasional losses through forest fires; stoppage of logs on account of low water in the streams, and many other vexations and difficulties which tend to skim off the cream of profit, but it is time now to give the platform to Mooswa, and hear what he has to say."

"Well," said Mooswa, "I will be candid enough to say that I have received some information on the subject, and am compelled to revise my opinions somewhat. It would really seem that no earthly lot is absolutely happy. But after all is said and done, this much at least is certain——."

What Mooswa intended to point out will never be known, for just at this moment the bay of a hound was heard in the vicinity, and in a twinkling the debaters and their auditors were scattering in all directions.

Annual Review of the Lumber Trade

A Year of Uninterrupted Prosperity and High Prices.—Domestic Consumption and Export Demand the Heaviest on Record.—Statistics of Production and Shipments.

Prosperity in the broadest sense of the word characterized the lumber trade of 1906. With scarcely an exception, timber products of all kinds were in brisk demand, and the average of prices was considerably in advance of what had prevailed in any previous year. Operations were as a rule carried on under favorable conditions, and the manufacturer or dealer who was unable to show a fair margin on the right side must indeed have been unfortunate.

Five years ago no one could have been found to predict the prices which were realized in 1906. To-day the question is, will lumber prices be higher or lower during the next few years, and five years hence will the experience of the past five years have been repeated. The future of the lumber industry is so closely connected with the general prosperity of the country that an answer to these questions can only be given with the flux of time. Statistics show, however, that notwithstanding the greater use of iron and steel, concrete,etc., the per capita consumption of timber throughout the world is increasing, while, as is universally acknowledged, the supply of timber is rapidly growing less. This fact may indicate the direction of lumber values.

Exceptional building activity was a feature of the year. In Toronto 3439 buildings, of a value of $13,160,000, were erected, while Winnipeg closely approached this remarkable record. Similar conditions existed all over Canada, the volume of work seemingly being limited only by the supply of material and labour. The enormous amount of building was a great factor in the lumber market, and the substitution of hemlock, spruce and the cheaper kinds of lumber for white pine, owing to the high cost of the latter, was responsible for advancing and sustaining the prices of the lower grades.

Railway construction assumed large proportions in 1906, over three thousand miles being built. It is not possible to secure statistics of the consumption of timber in the construction of tracks, bridges, culverts, etc., but that it would reach very large figures is shown by the estimate of Mr. H. J. Pettypiece that $52,000,000 was expended last year for the construction and equipment of new lines and for rolling stock to meet their requirements.

Notwithstanding that the efforts of lumber manufacturers were directed towards obtaining the maximum output of their mills, stocks at the close of the year were unusually light, for which the domestic demand above referred to and increased exports were responsible. The year emphasized the growing importance of Canada in relation to the world's lumber supply.

Every exporting province of the Dominion made larger shipments last year than in 1905. New Brunswick is 75,000,000 feet ahead in trans-Atlantic trade, and Nova Scotia manufacturers secured an increased volume of business from South America and the West Indies, of which the exact figures are not available. The white pine production of Ontario and Quebec was eagerly south for by United States consumers, who have become largely dependent upon the Canadian supply. British Columbia, too, made some gain in exports notwithstanding the great demands of the West for lumber.

Statistics of the exports to the United States for the calendar year are not yet available, but the following statement shows the exports in quantity and value for the fiscal year ending June 30, 1906:

	Quantity.	Value.
Logs and round timber, M. ft.	100,480	$772,272
Timber, hewn, squared, or sided, cu. ft.	256,015	46,720
Lumber:		
Boards, planks, deals, and other sawed lumber, M.ft.,	944,153	14,589,864
Shingles, M.,	900,806	1,852,512
All other lumber,	———	2,589,739
All other unmanufactured, (free)		2,398,842
All other unmanufactured, (dutiable)	———	168,016
		$22,417,966.

Compared with a year ago, prices are higher all round. The cost of production has increased from ten to twenty per cent. labor, supplies and stumpage being higher. Operations as now conducted yield a fair profit, but not more than that to which the lumberman is entitled.

ONTARIO.

The prediction that 1906 would be a record year for lumbering operations in Ontario was realized more fully than the most sanguine person anticipated, there being a most active demand for lumber at steadily advancing prices. Reports from all over the province reflect the prevailing prosperity. The pine and hemlock market was largely controlled by the producers, for at no time were there more than ample stocks to meet the requirements, while in the closing months an actual scarcity developed.

Some manufacturers placed their cut under contract early in the year, apparently believing that the prices then ruling were about as high as would be reached, but this did not prove to be the case. There was very little improvement in the upper grades of white pine, but the medium and lower grades advanced on an average $4 per thousand feet. The following quotations, taken from a price list of a large manufacturer, represent the prices ruling at the close of 1905 and 1906, and show more conclusively than words the extent of the advance in white pine, and hemlock :

	1905.	1906.
1 inch dressing and better shorts	$22.00	24.00
2 x 4 common, 10 to 14 ft.	18.00	22.00
1 x 6 to 8 mill run	20.00	25.00
1 inch mill run 18 ft. sidings	19.00	25.00
1 x 10 and 12 mill culls, 12 to 16 ft.	15.00	18 50
1 x 10 and wider dead culls	10.00	13.50
1 x 4 and 5 hemlock	12.00	16.00
1 x 10 hemlock	14.50	17.50
2 x 12 hemlock 12 to 16 ft.	14.00	17.00

It will be observed that the maximum advance, averaging about $5.00, was made on mill culls, the supply of which seemed to be totally inadequate for the demand. Box lumber also showed decided strength. Mill run white pine stocks probably averaged about $4.00 higher than in the previous year.

Not less remarkable was the course of the hemlock market. As shown by the above figures, the gain in price during the year was about $3 per thousand, and this notwithstanding that the production was considerably larger. The reason for this may be found in the disposition to substitute hemlock for white pine and other expensive woods.

The hardwood trade during the year was satisfactory from almost every point of view. The large amount of lumber carried over from the previous year, however, came on the market at every favorable opportunity, making it difficult to bring about an advance commensurate to the general conditions of the trade. Prices as a rule were $1 to $2 higher than in 1905, but the most satisfactory result of the year's business was the reduction in hardwood stocks, which has laid the foundation for improvement of a more substantial character this season. The implement and furniture factories are operating to their full capacity and are consuming large quantities of hardwoods, which, with the building demand, should give a marked impetus to the trade.

Shingles were in a fair demand throughout the year. Practically all varieties advanced about 25 cents. There was an exceptionally brisk demand at all times for lath, which became very scarce as the building season advanced. At the close of the year manufacturers were asking $5.50 for No. 1 white pine compared with $4.75 a year ago.

The following figures, furnished by the United States Consulate General at Ottawa, give the shipments from the Consular district of Ottawa for the fiscal year :

VALUE OF LUMBER SHIPPED FROM CONSULAR DISTRICT OF OTTAWA TO THE UNITED STATES FOR FISCAL YEARS ENDED JUNE 30TH, 1905 AND 1906.

	1905.	1906.
White Pine	$1,137,433.37	$1,429,198.88
Red Pine	8,907.34	27,046.53
Spruce	114,474.97	136,443.00
Basswood	1,908.91	26,665.47
Ash	4,174.05	4,450.11
Hemlock	4,454.20	36,471.82
Birch	980.63	906.46
Elm	702.27	601.49
Lath	124,532.00	133.407.33
Total	$1,397,567.74	$1,795,191.09

The production of lumber in Ontario was slightly greater than in the previous year. Manufacturers were desirous of operating their mills to the maximum capacity, but low water resulted in large quantities of logs being hung up, particularly in the Ottawa Valley district. The cut in the Georgian Bay district, according to the figures we have complied was approximately 100,000,000 greater than in the previous year, while the Ottawa Valley shows a reduction of 67,000,000 feet. The Georgian Bay figures are intended to include all the large mills to Sault Ste. Marie, but take no account of the cut west of that point. The figures are not exclusively for pine, but represent a certain percentage of hemlock and other lumber.

The quantity of pine saw logs of Ontario origin manufactured by the mills in the Georgian Bay and Ottawa Valley districts last year was probably in the neighborhood of 800,000,000 feet.

GEORGIAN BAY LUMBER PRODUCTION.

	1905—Ft.	1906—Ft.
Midland	55,000,000	55,000,000
Parry Sound	44,000,000	49,000,000
Little Current	17,000,000	23,000,000
Bying Inlet	44,000,000	58,000,000
Blind River	37,000,000	46,000,000
Thessalon	21,000,000	24,000,000
Collingwood	15,000,000	15,000,000
Waubaushene	30,000,000	26,000,000
Victoria Harbor	46,000,000	45,000,000
Longford Mills	6,000,000	8,000,000
Penetanguishene	17,000,000	21,000,000
Cutler	20,000,000	27,000,000
John's Island	18,000,000	17,000,000
Gravenhurst	28,000,000	34,000,000
Spragge	22,000,000	24,000,000
Sarnia	44,000,000	48,000,000
French River	11,000,000	14,000,000
Spanish Mills	19,000,000	20,000,000
Bracebridge	17,000,000	18,000,000
Sandwich	15,000,000	13,000,000
Severn	5,000,000	9,000,000
Warren	2,000,000	2,000,000
Callendar	9,000,000	23,000,000
Powassan	6,000,000	6,000,000
Cache Bay	23,000,000	25,000,000
Huntsville	16,000,000	18,000,000
Fesserton	7,000,000	10,000,000
Owen Sound	31,000,000	30 000,000
South River	21,000,000	19,000,000
Rainy Lake	5,000,000	5,000,000
Latchford	.....	8,000,000
Trout Creek	2,000,000	2,000,000
Brule Lake	5,000,000	5,000,000
Sault Ste. Marie	24,000,000	34,000,000
Other Points	8,000,000	10,000,000
	701,000,000	805,000,000

OTTAWA VALLEY PRODUCTION.

	1905—Ft.	1906—Ft.
J. R. Booth, Ottawa	120,000,000	80,000,000
W. C. Edwards & Co., Rockland and New Edinburgh	80,000,000	75,000,000
McLachlin Bros., Arnprior	60,000,000	60,000,000
Hawkesbury Lumber Co., Hawkesbury	45,000,000	35,000,000
St. Anthony Lumber Co., Whitney	36,000,000	35,000,000
Gillies Bros., Braeside	29,000,000	19,500,000
Gilmour & Hughson, Hull	25,000,000	25,000,000
Hull Lumber Co., Hull	10,000,000	3,000,000
Pembroke Lumber Co.	16,000,000	17,000,000
G. H. Perley Co., Calumet	14,000,000	8,000,000
R. & T. Ritchie, Aylmer	.....	13,000,000
James McLaren Co., Buckingham	20,000,000	12,000,000
J. R. & J. Gillies, Arnprior	3,000,000	3,000,000
Rideau Lumber Co., Ottawa	7,000,000	8,000,000
Sheppard & Morse Lumber Co., Ottawa	14,000,000	22,000,000
Fraser & Co., Ottawa	20,000,000	20,000,000
JamesDavidson, Fort Coulonge	5,000,000	1,000 000
Colonial Lumber Co., Pembroke	5,000,000	7,000,000
Estate Late R. Hurdman, Ottawa	6,000,000	5,000,000
Bucknam Bros. Co., Whitney	3,500,000	6,500,000
Other Points	24,000,000	20,000,000
	542,500,000	475,000,000

QUEBEC.

The production of lumber in the province of Quebec last year, judging from available statistics, was slightly greater than in 1905, although some logs did not reach the mills owing to low water. The demand throughout the year was good, extensive building operations in Montreal consuming large quantities of the local product, while the shipments to the United States were more extensive than usual. Lumber generally brought a higher price. Spruce boards, which sold in 1905 at $19 for Boston delivery, brought $22 last year, and at no time were there large stocks offering even at the higher range of values. So much of the product found a market across the line that lighter shipments to Great Britain were generally anticipated, but the statistics show an increase of over 24,000,000 feet from St. Lawrence river ports. The figures are 333,564,733 feet compared with 309,144,62 feet in 1905. Montreal shows a falling off of 8,721,355 feet, while Quebec takes a more important position by an increase of 21,989,175 feet.

MONTREAL SHIPMENTS.

The trans-Atlantic shipments from Montreal for the past two years were as follows :

	1905. Ft. B. M.	1906. Ft. B. M.
Watson & Todd	29,546,801	35,920,488
J. Burstall & Co.	14,864,879	21,036,903
W. & J. Sharples	34,959,623	19,092,240
R. Cox & Co	19,582,182	18,377.415
Dobell, Beckett & Co.	14,271,172	12,810,221
Charlemagne & Lac Oureau Lumber Co.	4,296,042	6,518,318
McArthur Export Co.	6,500,000	6,467,153
Cox, Long & Co.	5,942,002	4,723,529
E. H. Lemay	2,966,000	3,630,000
McLaurin Bros.	1,458,582	1,345,000
Railways and small shippers.	22,654,973	18,399,634
Total	157,042,256	148,320,901
Decrease in 1906	8,721,355 feet.	

FROM PORTS EAST OF MONTREAL.

The shipments from Quebec and other St. Lawrence ports east of Montreal in 1905 were:

Shippers.	Quebec. Feet.	Three Rivers and Pierreville. Feet.	Other Ports. Feet.
Price Bros	.....	.....	35,625,307
H. R. Goodday & Co	25,782,804	.....	.....
Dobell, Beckett & Co.	21,612,129	18,497.435	11,245,307
W. & J. Sharples	25,328,000	4,005,540	.....
McArthur Export Co.	8,967,876	.....	.....
Harold Kennedy	11,851,407	.....	.....
J. Burstall & Co.	7,618,413	233,035	.....
King Bros., Ltd	3,975,000	.....	8,730,043
A. McCall	2,221,536	.....	.....
Totals 1906	106 907,165	22,736 0 0	55,600 657
" 1905	84,917,990	19,924,627	47,259 755
Increase for 1906	21,989,175	2,811,383	8,340,902

The largest shippers from the St. Lawrence were Dobell, Beckett & Company, with a total of 64,165,092 feet, followed by W. &. J. Sharples with 48,425,780 feet, and Watson & Todd with 35,920,488 feet.

SQUARE AND WANEY TIMBER.

In the Quebec timber trade there was remarkable activity throughout the year, the export showing a substantial increase in nearly all classes. The production of oak, elm, birch, and ash in the winter of 1905-6 was heavier than in the two previous seasons, while white pine of both square and waney variety was taken out in smaller quantity. A large stock of the latter, however, was carried over at the coves in Quebec last winter, so that the export for the year reached large proportions.

A study of the statistics of the timber trade shows that some striking changes have taken place within a few years. The following figures represent the production, in cubic feet, for the past five years.

TIMBER PRODUCTION FOR FIVE YEARS, IN CUBIC FEET.

	1902	1903	1904	1905	1906
Square Pine	384,440	419,600	240,176	137,440	76,720
Waney Pine	1,830,120	1,865,560	2,256,352	1,210,920	676,600
Red Pine	71,160	57,360	15,920	1,200	31,400
Oak	653,520	926,680	328,360	193,920	578,120
Elm	561,920	417,800	262,800	484,720	602,160
Ash	79,920	57,200	14,640	10 440	8,880
Birch	260,200	196,240	125,920	156,360	361,320

The statistics of square timber measured at the office of the Supervisor of Cullers, Quebec, from 1890 to 1905, show the tremendous falling off in timber shipments from the port :—

1890	11,092,203
1891	4,295,112
1892	7,841,227
1893	6,687,077
1894	5,342,709
1895	5,498,500
1896	5,181,173
1897	7,764,297
1898	4,990,950
1899	4,247,710
1900	4,010,838
1901	4,155,353
1902	3,854,880
1903	4,072,560
1904	3,258,380
1905	2,190,120
1906	2,335,200

It will be observed that there has been an uninterrupted decrease in the quantity of square pine produced while the waney pine output declined from 2,256,352 cubic feet in 1904 is the smallest on record, last year.

The wintering stocks at Quebec are unusually low in respect to white pine, while elm and birch show an increase. The five-year figures are as follows :

WINTERING STOCKS AT QUEBEC, IN CUBIC FEET

	1902	1903	1904	1905	1906
Square Pine	395,962	413,469	347,667	289,217	81,375
Waney Pine	261,393	406,038	1,268,937	1,174,287	267,356
Red Pine	66,998	53,225	55,561	21,030	20,675
Oak	192,162	491,851	66,5670	498,762	325,890
Elm	539,183	419,659	322,778	350,531	404,095
Ash	49,818	47,035	25 145	5,260	1,661
Birch	5,739	11	1,027	673	25,428

The tendency of timber prices during the year was upwards, with the exception of birch, which was almost a drug on the British market and which declined about five cents per cubic foot at Quebec. In ten years the price of white pine timber has advanced one hundred per cent. and owing to the high cost of production, a still further rise does not seem improbable. The following comparison of prices of Quebec timber per cubic foot ten years ago and now is interesting:

COMPARISON OF TIMBER PRICES.

	1896	1906
Square white pine, 40 feet aver.	24 cts.	50 cts.
First class Ottawa waney, 20 in aver.	40	75
Red pine, average quality	24	35
Oak, average quality	40	60
Elm, 35 feet average	30	60
Ash, 16 inch average	28	42
Birch, 16 inch average	20	28

The particulars of the Quebec trade, furnished by J. Bell Forsythe & Company's annual circular, published by the Quebec Chronicle Printing Company, are as follows, the quantity being given in cubic feet:

WHITE PINE.—The combined stock of waney and square white pine is decidedly under that recorded in any previous year. From reliable estimates it is evident the manufacture will not result in a larger supply than the moderate one of 1905, though showing some recovery from the small production of last winter. Unless advanced prices can be

obtained and maintained production will again fall away to the vanishing point.

		Supply.	Export.	Stock.
1906	Square..	76,720	1,857,600	81,375 Square
	Waney..	676,600		267,356 Waney
1905	Square..	137,440	1,477,023	289,217 Square
	Waney..	1,210,920		1,174,287 Waney

RED PINE.—The supply has about met the export, leaving wintering stock almost unchanged. The probability is that very little will be made this winter.

	Supply.	Export.	Stock.
1906	31,400	31,721	20,675
1905	1,200	38,284	21,039

OAK—The demand for this wood has revived, probably to some considerable extent owing to the extreme difficulty of getting satisfactory sawn oak waggon scantling from the United States, even at the much increased prices that have been paid for same. The greatly advanced figures paid by Quebec shippers for oak, has induced some manufacturers to resume the business of making timber, but supply will be limited and to some extent uncertain, besides being affected by the scarcity of available suitable standing timber, costliness of manufacture, and the difficulties in reorganizing an abandoned business.

	Supply.	Export.	Stock.
1906	578,120	731,115	325,890
1905	193,920	321,042	498,762

ELM.—The supply has been rather overdone, owing to a very favorable winter for making timber, and to the manufacturers having generally sold on contract at top prices. The stock has not greatly increased in Quebec, but it is understood to be rather a full one in the home markets. The production will be moderate as most of the readily available standing timber was swept up last winter. If consumption continues on level of past years, it will rapidly overtake the supply, when another advance in value may be looked for, meantime makers would be wise to consider market.

	Supply.	Export.	Stock.
1906	602,100	536,277	404,095
1905	484,720	426,470	360,531

ASH.—Very little ash timber is now made for export and probably a price similar to that of rock elm would be required to induce the manufacture of any considerable quantity.

	Supply.	Export.	Stock.
1906	8,880	10,155	1,668
1905	10,440	25,118	5,260

BIRCH.—Very favorable weather last winter, and the high prices then paid by shippers to induce manufacture, have resulted in an over supply of this wood. The accumulated stocks in British ports have now to work off before a further production is warranted. Very little will probably be made, and values should steadily recover.

	Supply.	Export,	Stock.
1906	361,320	348,088	25,421
1905	156,360	152,251	673

SPRUCE DEALS.—An improvement in the markets of the United Kingdom has been met by an increased production and export. Recent advices show the supply has been ample for the moment, and values on the other side of the Atlantic have given way to some moderate extent; in spruce the St. Lawrence export has to contend with similar wood from various sources, such as spruce from the Maritime Provinces, whitewood from Riga and the North of Europe generally and even Galatz, but any marked fall on last year's figures would lead to the diversion of the product of many mills to the United States, already a formidable competitor.

	Supply.	Export.	Stock.
1906	3,804,580	4,053,835	303,988
1905	2,945,523	3,214,855	553,243

PINE DEALS.—The Quebec production and shipment have practically ended. The Ottawa production is rapidly decreasing, as one saw mill after another gives up the manufacture of deals and makes only sidings and boards. The Ottawa manufacturers are now asking an advance for next year's pine deals of ten per cent. over the highest prices yet paid.

	Supply.	Export.	Stock.
1906	8,321	7,782	6,700
1905	8,682	17,975	6,199

SAWN LUMBER.—The States and South American demand is very good indeed, and every advance in price yet asked has been readily responded to. The future continues most promising.

THE MARITIME PROVINCES.

Maritime Province lumbermen have reason to feel satisfied with the business of 1906, which shows a considerable expansion as compared with the previous year. The mills as a rule were well supplied with logs as a quantity of the previous season's production which had been hung up in the St. John river came out early in the spring. The logging season of 1905-06 was satisfactory with the exception of the scarcity of larbor which was common to the entire Dominion.

The United States and Great Britain, as usual provided the market for most of the lumber production of New Brunswick. Large shipment of spruce boards were made to the Eastern States, where they were at all times saleable. Prices advanced during the year about $2. per thousand, the average figures being about as follows: 10 and 12 inch $18.50 to $19 per M; 9 inch, $15.50 to $16; 6 and 8 inch $13.50 to $14 f.o.b. St. John. The following statement furnished by the United States Consulate General reflects the activity which chraracterized the export trade to the United States:

	1905.	1906.
Lumber	$962,019	$970,866
Pulp	301,658	365,658
Lath	304,619	463,163
Totals	$1,568,296	$1,799,687

As in 1905, there was a lively demand for spruce lath for the Eastern States market, New York and Boston taking large quantities. The high prices stimulated production, causing a slightly weaker market towards the close of the year, but prices are still high. The consumption of spruce lath is increasing and it is not expected that prices will recede much this season.

The export trade to Great Britain was very brisk during the early part of the year but fell off somewhat toward the close. The total European shipments from New Brunswick however, show an increase of approximately 74,000,000 feet over the previous year. Exports were curtailed during the fall months owing to high freight rates and heavy stocks in Great Britain, but notwithstanding this fact the quantity of lumber carried over in the mill yards is comparatively light.

The early spring price for English deals was about $13.25 f.o.b. St. John for an average specification; but the demand seemed to absorb the supply as quickly as manufactured, with the result that by midsummer the price had advanced one dollar. Few sales were made above this figure until September, when owing to light stocks, manufacturers were able to realize $14.75 which was the highest figure reached subseqently the price reacted to about $14, where it remained until the close of the year.

Although complete statistics of the lumber production of Nova Scotia were not obtainable, it may safely be stated that the volume of the years business was the largest on record. The season opened with a strong demand for all classes of lumber, buyers being willing to close contracts earlier than usual. The New York market took a large quantity and shipments to South America were increased. The Davison Lumber Company exported 40,000,000 feet, 13,000,000 feet being shipped to South America, 17,000,000 feet to the United States and the balance to Madeira, West Indies and other points. Ninety vessels were loaded by them at Bridgewater.

Of the West Indies market Messrs. Clarke Bros., of Bear River, say: The West Indies market has been but scantily supplied and buyers there have been forced at last to order cargoes, paying the market price at port of shipment. This is a step in advance, and, as there is no lack of demand, we would strongly urge that all manufacturers sell their product before shipment, thus avoiding the serious losses that have occurred in the past when forwarding cargoes on consignment. Neither American or West Indies merchants send their products to our ports to be sold at auction to the highest bidder, nor should we send our lumber to any market unless at a c. i. f. or f. o. b. price.

The total production of lumber in Nova Scotia last year is estimated in the neighborhood of 250,000,000 feet, composed largely of spruce and hemlock. Compared with 1905 prices were about two dollars per thousand higher. Stocks at the close of the year were light and the outlook for 1907 is very bright.

TOTAL TRANS-ATLANTIC SHIPMENTS FROM NEW BRUNSWICK FOR PAST 10 YEARS.

Year.	Sup. Feet.
1897	494,000,000
1898	412,000,000
1899	426,000,000
1900	489,000,000
1901	399,000,000
1902	452,000,000
1903	388,000,000
1904	359,000,000
1905	346,000,000
1906	421,000,000

SHIPMENTS FROM NEW BRUNSWICK BY PORTS, 1905 AND 1906.

Port	1904. Sup. feet.	1905. Sup. feet.
Miramichi	86,237,558	110,539,984
St. John	161,749,954	191,579,485
Campbellton	30,194,831	39,889,527
Dalhousie	19,377,912	19,000,000
Bathurst	15,094,547	20,662,969
Richibucto and Buctouche	5,723,688	3,876,418
Outports of Sackville	6,831,294	8,618,794
Shediac	2,629,942	1,259,100
Hopewell Cape	12,246,341	23,173,149
Harvey	7,127,063	2,501,023
Total Shipments	347,213,135	421,080,449

SHIPPERS FROM PORT OF ST. JOHN.

Name	1905.	1906.
John E. Moore & Co.	44,640,316	71,827,340
W. M. McKay	45,223,887	58,215,918
Alex. Gibson Co	28,121,381	33,508,352
George McKean	21,653,228	20,118,116
Other Shippers	22,111,142	7,909,759
	161,749,954	191,579,485

SHIPPERS FROM PORT OF MIRAMICHI.

NAME	1906
F. E. Neale	36,650,985
J. B. Snowball Co.	25,349,275
W. M. McKay	17,930,186
D. & J. Ritchie	12,131,000
E. Hutchison	10,554,230
Geo. Burchill & Sons	6,105,000
Rose Bank Lumber Co.	1,819,308
	110,539,984

SHIPMENTS FROM SOME NOVA SCOTIA PORTS.

	Feet B.M.
Halifax	52,513,000
Parrsboro	42,500,000
Pictou	5,500,000
Pugwash	25,000,000
Bear River	11,000,000
Bridgewater	40,000,000
	195,000,000

DISTRIBUTION OF HALIFAX SHIPMENTS, SEASON 1906.

Name.	United Kingdom.	United States.	France.
Smith, Tyrer & Co.	3,370,000	1,840,000	
T. H. Mathers & Son	7,400,000	4,400,000	
Gillis & Walls	1,155,000	772,000	
W. M. McKay	15,000,000		
John E. Moore & Co.	10,172,000		
Alfred Dickie Co.	11,594,000	1,654,000	2,796,000
E. G. Baker	1,352,000		
T. G. McMullen	2,500,000		
	52,513,000	8,669,000	2,796,000

BRITISH COLUMBIA.

The most phenomenal phase of industrial activity in British Columbia in the year 1906 was that involved in the expansion of the lumber business. Licenses covering 4,000 square miles of timber limits were issued by the Lands and Works Department, almost twice as many as during 1905, and nearly 40 per cent of the whole number that have been issued since the province was constituted. The following figures for the past four years eloquently tell this story :

	Timber Licenses Issued.	Acreage Covered.
1903	1,307	836,480
1904	1,451	938,640
1905	2,173	1,390,720
1906	4,000	2 560,000

East of the Cascades, each licensee pays an annual rental of $115, and west of the Cascades, $140. Those issued during 1906 were almost evenly divided between the two classes, with the balance, if any, in favor of the latter. Taking the average of the two sums, therefore, as a basis ($127.50), the revenue derived from license fees alone was $510,000. In addition to this item there were over 2,000 hand loggers licenses issued at $10 each, making a total of $530,000 derived by the Government from timber licenses last year.

It has been found impossible to obtain complete statistics of the total production of lumber in British Columbia, but by one authority it has been estimated at 600,000,000 feet, or 125,000,000 feet more than in 1905. This estimate, in our opinion, is too low. A number of new mills were completed early in the year, and every mill in the province was practically glutted with orders for lumber. The one great drawback to the year's operations was the scarcity of logs and labor. In other respects conditions were ideal.

There was no interruption to the steady advance in the price of logs. Nearly every increase made was looked upon as representing the top notch, only to be followed a few weeks later by another rise. Merchantable logs which in the early spring were worth $7 per thousand, had advanced to $14 before the close of the year. The price of the manufactured stock was likewise increased, but not to the full measure warranted by the remarkable conditions. The maximum price of rough lumber was $17, which, considering the cost of logs, higher wages, and the fact that the average mill employee is a much less efficient workman than formerly, cannot leave a large margin of profit.

The shingle industry also enjoyed a moderate degree of prosperity, but there were periods when the demand was not brisk. The average price of shingle bolts was $4.50, while the manufactured product sold in the spring, for Ontario delivery, at $3.60 for XXXXX 5 to 2 inch, and $3.05 for XXX 6 to 2 inch. This price was twice advanced, and when the year closed the quotations were $3.80 and $3.25 respectively. Elsewhere in this issue the shingle trade is reviewed by Mr. H. H. Spicer, who, owing to his long connection with the business, is regarded as an authority.

Foreign shipments of lumber from British Columbia show an increase of approximately 17,000,000 feet over those of 1905 and 26,000,000 over 1904. The exports to South America and Australia increased nearly one hundred per cent., while one shipment was made to Egypt. The Fraser River Sawmills, formerly known as the Ross-McLaren mills, resumed operations during the year, and are now an important factor in the export business. Several other mills are now being built for the purpose of engaging in the cargo trade, which promises in the near future to show a wonderful expansion. Below will be found statistics of the exports as furnished by R. P. Rithet & Company's Shipping Report :

CARGO SHIPMENTS OF LUMBER FROM BRITISH COLUMBIA IN 1906.

FROM HASTINGS.

Vessel.	Destination.	Feet B. M.
Miowera	Sydney	168,634
Wilhelmine	Delegoa Bay	1,497,142
Moana	Suva, Fiji	35,540
Castor	Iquique	1,782,877
Puako	Sydney	1,329,000
Aorangi	Suva, Fiji	25,196
Athenian	Hongkong	36,886
Glenelvan	Melbourne	1,632,526
Hawaii	Nagasaki	1,126,752
Arctic Stream	Sydney	1,303,883
Alexander Black	Callao	1,191,158
Elginshire	Sydney / Newcastle	1,797,787
Robt. R. Hind	Suva, Fiji	643.585
Chiswick	Sydney	1,600,067
Maheno	Suva, Fiji	22,570
Henley	Auckland	36,410
Mozambique	U. K.	1,967,210
Needles	Shanghai	2,212,886
Bucentaur	New Zealand	31,667
Pass of Leny	Cape Town	1,052,285
Makaweli	Osaka	1,015,919
Seefahrer	Antofagasta	1,693,341
Duchalburn	Greenock	1,712,154
Inverclyde	Cardiff	1,277,880
Greenwich	Alexandria	2,184,120
Jupiter	Callao	1,387,373
Oanfa	Devonport, Eng	105,890
Frieda Mahn	Callao	1,030,150
Cleomene	Iquique	1,379 534
Telemachus	Japan	69,168
Pondo	Sydney	928,064
Bellerophon	Kobe, Japan	8,909
St. Mirren	Callao, Peru	1,656,427
Inverneill	U. K.	1,133,084
Bucentaur	Suva, Fiji / Dunedin	7,506 / 20,000
Alsterkamp	London, Eng	1,473,124
Inveric	Sydney	3,391,334
Ningchow	Japan	67,000
Barcore	Adelaide	1,678,627

FROM CHEMAINUS.

Vessel.	Destination.	Feet B.M.
Mary L. Cushing	Sydney	1,104,197
Brodick Castle	Adelaide	1,434,347
Adderley	Sydney	1,034,443
Ditton	Antofagasta	2,179,390
Sir Robert Fernie	Valparaiso	1,921,829
Chili	Greenock	1,720,417
Chiswick	Sydney	1,045,430
Levernbank	Antofagasta	1,956,644
Inverness	Cape Town	1,716,094
Segura	Melbourne	1,503,023
Wyneric	Nome	794,784
Eaton Hall	Valparaiso	1,547,907
Kinross	Antofagasta	1,066,863
Aysgarth	Port Pirie	2,133,889
Duneric	Nome	332,000
Curzon	Valparaiso	907,104
Comliebank	Antofagasta	1,817,971
J. B. Thomas	Valparaiso	1,328,521
Adderly	Sydney	1,068,078
Lisbeth	South Africa	2,154,063
Eliza Lihn	Antofagasta	1,859,550

FROM FRASER RIVER.

Vessel.	Destination.	Feet B.M.
Curzon	Valparaiso	422,727

SHIPMENTS BY COUNTRIES.

	1904. Ft. B. M.	1905. Ft. B. M.	1906. Ft. B.M.
Great Britain	7,498,301	13,690,869	11,187,537
South America	15,647,808	13,332,993	25,341,426
Australia	10,045,094	11,596,482	21,137,697
South Africa	2,517,154	7,093,681	6,419,584
China and Japan	4,802,426	4,787,784	6,459,349
Fiji Islands	308,332	29,949	734,397
Yukon			1,126,784
Egypt			2,184,120
Germany		983,342	
France	1,308,662		
Total	42,199,777	51,515,100	74,590,894

CARGO SHIPMENTS FROM BRITISH COLUMBIA FOR THE PAST 10 YEARS.

Year.	Feet B.M.
1897	62,288,177
1898	55,134,703
1899	49,132,308
1900	74,981,513
1901	67,656,350
1902	56,685,008
1903	62,238,694
1904	42,199,777
1905	51,515,100
1906	74,590,894

UP-TO-DATE LOG RULE.

Mr. B. F. Kean, of Orillia, Ont., has favored the Canada Lumberman with one of his log rules, which he claims is the "only up-to-date log rule made in Canada." He enumerates the advantages as follows: They are thoroughly adapted and made specially to meet the requirements of our system of scaling logs in Ontario, having the "inches" in large plain figures, and so constructed that no matter in which way you pick up the rule the inches are in plain sight and come readily to your hand. They are well and neatly made and a rule a culler will take care of and have a pride in working with. The handle on the end is a special feature for holding the lead, and a great advantage, especially for checking logs above arm's reach, or short logs in the skidways. A comparison with the American made rules will suffice to show they are far superior in every particular.

The Logging Industry of British Columbia

By T. F. PATERSON, B. S. A.

[Mr. T. F. Paterson, B.S.A., the writer of the following article, is president of the Cascade Mills, Limited, and business manager and half owner of the Paterson Timber Company, one of the largest independent logging companies on the Pacific Coast, operating five large camps. Until December of last year he was secretary-treasurer and quarter owner of the Canadian Pacific Lumber Company, Limited, of Port Moody, when the company disposed of its entire interests. Mr. Paterson now devotes most of his time to the management of the logging and shingle business in Vancouver. Two years ago he was chosen by the lumbermen of the Pacific Coast to present their case before the Ottawa Government for a tariff against American lumber.—The Editor.]

The logging industry in British Columbia has never been in so prosperous a condition as it is at the present date. Up to the past year the part it played in the manufacture of lumber was looked upon as of minor importance to the milling of the raw material after it reached the manufacturing centres.

Until a few years ago but little capital was required to get the necessary equipment to put logs in the water. The industry was largely in the hands of men who were mediocre in business ability, and as many of the larger mills did considerable of their own logging, and the market for lumber was not so active as it is at the present time, those in the business who had to sell in a market which was often glutted, fared very badly. Logs commanded a price which barely allowed the operator living expenses, and each year brought its crop of failures.

The scene has now changed. Many new mills have been built in the past two years and the capacity of most of the older mills has been greatly increased. The demand for lumber during the year 1906 has exceeded the supply and the future would seem to hold a continuance of this active demand for some years, unless some unforeseen financial depression should sweep Canada. Most of the new mills hold but little standing timber and they consequently have to look to the independent logger to supply them.

During the past two years of good times, many of the larger logging firms have put their profits largely in timber and many of them now hold large areas which are increasing in value each year. Most of the timber near the water on the Coast has been logged and it now requires considerable capital to get the timber farther back. Where once it took from three to five thousand dollars to equip an ordinary logging camp, it now requires from ten to fifteen thousand for an outfit to do similar work. Consequently, firms with considerable capital have now engaged in the business and has given the industry a status equal to, if not greater, than the milling of the product after it reaches the mill. On the American side of the line logging operators practically dictate as to what prices must be paid for logs, and although the industry on the Coast of British Columbia has not yet reached that important position, it is nearing that goal every year. At the present time owing to the scarcity of logs, the logging firms practically dictate what must be paid for logs and indirectly what must be paid for lumber, and it now looks as if this condition of affairs is likely to continue throughout this year.

It is somewhat difficult to get a close estimate of the amount of timber cut and manufactured in British Columbia west of the Coast Mountains, but it is within the mark to say that last year at least 650 million feet has been used in the manufacture of lumber and shingles alone. Taking the capacity of the different mills in the Province, it is safe to say that over one billion feet of lumber was cut in British Columbia during 1906. As the wage rate per man in the logging camps is about double that paid in the mills, the larger percentage of the wage bill for handling this amount of lumber was paid by the logging industry. The average cost for labor for logging is about $5.00 per M, so that over four million dollars was paid during 1906 by the logging industry of the Province. This amount will be largely increased in the year 1907.

Throughout the year 1906, logs rose steadily in price. In the earlier part of the year delivered prices in Vancouver were $10.00, $8.00 and $6.00 respectively for Nos. 1, 2, and 3 grades. Owing to the increased demand for lumber, they had risen $1.50 per M and the last two months of the year $12.00 to $12.50 per M delivered in Vancouver has been paid for logs of very ordinary quality. This rise was caused by the increased demand for lumber, the increased cost of logging through scarcity of labor, and the difficulty of getting timber which can be opened and operated quickly. It was also impossible to get logging engines to supply the demand, although the British Columbia and Puget Sound firms were working over-time trying to catch up with the trade. At the present time none of these firms will guarantee to fill orders for four months. Most of the new equipment has not been used in opening new camps, but to increase the plants already installed, as the lumber had to be hauled farther to the water.

During the past year many new logging outfits have been installed, and some of the larger milling firms have put in logging railway plants. However, most of the logging is done as yet by donkey engines. Sometimes as many as three large road engines, each equipped with cable to reach a mile or more into the woods, are used to haul the logs across skids embedded in a well-made roadway to the waterfront. Small engines are used to haul the logs out of the woods on to the main skid road, where they are coupled up in turns of from 5 to 8 logs, and are then taken hold of by the road engines in turn. The old ox-team has been relegated to the past, and horses, outside of the shingle bolt camps, have been almost entirely discarded. Road engines in the near future will be largely substituted by the railway locomotive, and when that time comes, the day of the small operator will be at an end.

During the past year, the cost of putting logs into the water has been largely increased by the increased rate of wages obtained by men working in the lumber camps. There has been a scarcity of good loggers throughout the year, and unless the industry can receive an additional supply of labor for 1907, the operators will be badly handicapped. Wages run from $2.50 to $6.00 per day, the average being about $3.75. Out of this, of course, the workman has to pay his board, about $5.00 per week. There is room at present in British Columbia for at least two thousand good men to work in the woods. Labor in this industry is very unsteady, and the higher the wages the more unsteady the men, as they can make a stake very fast, and consequently lay off much oftener to spend their earnings; a logger's stake averaging about $60.00 to $75.00.

The industry on the Coast is now headed by a strong and influential Loggers' Association. During the past year, through its influence, the Government was induced to pass some very important legislation. A new Scale Bill whereby all logs cut on Government lands must be scaled by independent Government scalers paid by salary, is one of the most useful pieces of legislation ever enacted in the interests of the lumber industry. Up to that time, the scalers, although official, could be employed by the employees of either a mill or logging company, and had practically to obey the dictates of their masters. Under the new law, the logger, the millman and the Government are getting a fair deal, and the act is giving thorough satisfaction to all parties who wish fair play in the matter.

LUMBERING IN BRITISH COLUMBIA

(By Our Vancouver Representative.)

British Columbia is noted chiefly for three great industries—lumbering, mining and fishing. A fourth, namely, that of fruit growing, has of recent years come more to the front, but yet it is by the other three that British Columbia is best known. Of these the greatest and probably the most widely known is that of lumbering. This industry in British Columbia dates back over forty years, but it is only since the advent of the Canadian Pacific Railway twenty-two years ago that much of its lumber product has found its way to the Eastern markets; and more especially within the past six or seven years has its vast forest resources formed a mighty factor in the export trade of Canada's far Western Province, and helped to spread the name of British Columbia not only throughout all Canada, but into the Eastern States and across the water to England,—yea, farther—British Columbia fir is finding a ready market in far-away Australasia.

Lumbering is being carried on in nearly all parts of the southerly half of this great Province, and there are two distinct divisions: that of the Coast and that of the Mountain. The former would include all manufactures within one hundred miles of the salt water on the mainland, and those on Vancouver Island, while the Mountain manufactures are commonly understood to be those in the interior of British Columbia, known as the Kootenay District.

Lumbering was first commenced on the coast, where it was convenient to ship by water, but since the construction of the Crow's Nest branch of the C. P. R., a great many new mills have been built along that line and on short lines tributary thereto. These Kootenav District manufacturers supply chiefly the Northwest prairies, especially Alberta, which is their nearest market. The timber gotten out there is somewhat smaller on an average than that which is found on the Coast, but owing to the rapid filling up of Alberta and Saskatchewan a ready sale is found for all timber cut in the mountain section. While a great deal of clear stuff is gotten out from the interior mills, yet the bulk of the lumber known as "clear" comes from the Coast mills, that of the interior being considered, as a rule, second to the Coast product.

Vancouver Island is densely wooded in some sections, and practically barren in others. North of a line drawn from Quatsino Sound to Alert Bay the Island is almost barren of merchantable timber. The west coast, from Quatsino Sound south, is mostly timbered lands, cedar predominating, with some fir, spruce, hemlock and balsam, their relative quantities being in the order in which they are named. On the east coast, from Alert Bay south, fir predominates, with cedar, hemlock, and balsam in the order named. On the Coast mainland, from Vancouver north to Knight's Inlet, is found fir, cedar, hemlock and balsam, with fir predominating, and the other kinds in the order named. From Knight's Inlet north to Seymour Inlet, is found cedar and spruce, the former in much the larger quantities. North of Seymour Inlet chiefly spruce is found, with a small scattering of cedar. Forestry is not very dense in that section, the trees being of a good size, but widely scattered.

The present stumpage dues are 50 cents per thousand feet per year, renewable for twenty-one years. A sixteen year license can be obtained upon payment of 60 cents per thousand feet per annum.

The old method of logging was by horses and oxen trains, a skid road being built, the skids being laid every ten feet apart, and in marshy and boggy ground it was necessary to fill in between the skids with logs, thus making a corduroy road. The present method of logging, however, is largely by the use of logging engines. The usual method is to construct primarily a main skid road through the bush on which road are placed large road engines, one every mile or mile-and-a-half. A one-inch cable a mile or a mile-and-half in length is carried on the drum, with the proportionate amount of $\frac{5}{8}$ inch cable for haul-back. As an auxiliary to these large engines, small "yarding" engines are employed, their work being to haul the log out from the stump to the main road. These engines are equipped similarly to the large road engines, having a large cable for hauling the log and one of smaller diameter for haul-back. In level country it is the custom to use a horse in place of a power haul-back on the "yarding" engines. When a sufficient number of logs have been hauled out by the "yarding" engines to the main road, a load is made up and, by the use of road engines, is hauled along the skid road to its destination, either to the water or to the logging railway. About fifteen thousand feet of logs is the usual load for the road engine to haul.

This improved method of logging has been in use on the Coast for some time, but hitherto horses have been used to a very large extent in the interior. Quite a number of the Mountain loggers, however, are now adopting the donkey engine for logging purposes.

About seventy-five per cent. of the lumber cut on Vancouver Island is logged by the manufacturer himself, all the large mills having their own logging equipment and camps. On the Coast mainland the same conditions have existed in years past, but most of the new mills which have started up of late purchase their logs from logging companies, and some of the older ones do the same. This method seems to be growing in favor, and certainly relieves the manufacturer of a lot of trouble in getting out logs, and enables him to devote more time to the manufacture of lumber. In the interior, however, nearly all the mills own and operate their own logging camps.

The band saw and the gang are growing in use and popularity throughout the whole Province. As yet only two mills on the Island have adopted them, these being The Victoria Lumber and Manufacturing Company at Chemainus and The Sutton Lumber Company at Clayoquet Sound. All the other mills continue to use the circular. On the Coast mainland, the use of the circular and the band is about equally divided in popularity, many of the mills having two sides, with a circular on one side and a band on the other. In the Interior all the small mills are using circular saws and practically all the large mills a double-cutting band saw, about seventeen of these having been installed in different mills. Only one gang saw is in use in the Kootenay District and no single-cutting band saws whatever.

About one-third to one-half of the mills on Vancouver Island and the Coast mainland manufacture lath. In the Interior, however, all the large mills and about twenty per cent. of the small mills operate lath machines, this being the most advantageous method for them to dispose of the slabs and refuse. Where a mill is near a town, most of the slabs and refuse are cut up into 16-inch lengths and sold as firewood. This is also used largely for filling in purposes. In the mining district, a ready sale is found for slabs to the miners for coal doors, etc.

Practically all of the mills are lighted by electricity, having their own generating plants. This is about the only use to which electricity is put in present day sawmill operations.

Lumber Exports from St. Lawrence River Ports

By ED. HARPER WADE.

ED. HARPER WADE

THE business of exporting wood from the St. Lawrence has seen many changes during the past half century. From records that go back to 1850 it appears to have reached its highest point in the early sixties, when white pine timber shipped from Quebec by sailing vessel, largely in the hewn log, was the common building wood of the United Kingdom. Its low price and suitability for conversion by hand labor, together with its intrinsic excellence, enabled it at that time to defy the competition of all substitutes. In those days nearly every port in Great Britain and Ireland brought in its Quebec cargo or cargoes, and over one thousand ships loaded in the port of Quebec annually. The export of square white pine in 1864 amounted to 23,737,000 cubic feet. By degrees, as the old-fashioned saw-pit, with its top and bottom sawyers was replaced by the modern sawmill, and white pine advanced in cost, as the most accessible and readily available timber disappeared before the axe of the lumberman or was destroyed by forest fires, pitch pine from the Southern States took its place for many purposes. The brigs and barques of from two to three hundred tons register that for long made their two Quebec voyages every year were lost or broken up, and the small ports having become connected by rail with the larger ones, drew their timber supplies from them instead of importing direct. Still the larger sailing vessels carried their cargoes from Quebec to the leading ports. Then came the beginning of the change from hewn to sawn wood. The number of deal producing sawmills in the immediate neighborhood of Quebec was greatly increased in the early seventies, but before long it was found more advantageous and economical to build the mill in the vicinity of the standing timber than to bring the log to the mill from a distance. The great sawmilling industry of the Ottawa valley developed, with its centre in the immediate neighborhood of the Chaudiere Falls water power. Instead of floating down to Quebec in immense rafts the pine sawlogs, or, as was done for many years from Hawkesbury and elsewhere, the pine deals cut from them, it became customary to ship the deals in barges from the mill to the point of delivery to vessel. Steamers gradually replaced ships for all descriptions of cargo, and as these could readily reach Montreal, it became evident that deals cut in Ottawa could be more easily and less expensively shipped at that port than from any place lower down the St. Lawrence, and Quebec lost the trade. Later on sawn pine boards of various thicknesses largely took the place of the old-fashioned three-inch deal. What hewn timber export business remains is still carried on at Quebec, largely because the facilities for handling it are already there, but it is now done by steamers, and sailing ships are almost unknown in the St. Lawrence wood export trade, except to a very limited extent in connection with ports below Quebec.

Viewing the future in the light of the past, it is clear enough that further changes will come. The diminishing supply of white pine and the increasing demand for what remains, not only in the United States but in Canada itself, clearly foreshadows a time, probably not far distant, when the export of white pine in any form from any port of the St. Lawrence will fall to a negligible quantity, and the shipment of pine deals, boards and sidings assume the present inconsiderable proportions of the hewn timber trade in Quebec, which by that time will probably have come to an end.

Of the various descriptions of wood goods formerly shipped from Quebec, many have almost or entirely disappeared as articles of export. Enormous quantities of oak staves and hemlock lathwood helped each year to make up Quebec cargoes within the memory of men still active in the trade. Now both, as articles of Canadian export, are quite unknown. Oak and elm are the only hardwoods yet shipped to any considerable extent in the hewn log, except birch, which is always with us, and appears to be still obtainable in ample quantities to meet any demand for it. The only branch of the wood export trade that promises anything like permanency is the shipment of spruce in the three-inch deal. Immense forests of this wood still exist, and as spruce, unlike pine or most of the hardwoods, reproduces itself and matures for commercial purposes in a comparatively limited period, these forests will form an unfailing reserve if judiciously husbanded and carefully cut over, though even their existence is threatened by the requirements of the pulp industry, unless the necessary steps are taken to conserve the larger areas in good time.

So much for the past and future, but it is no doubt the present that has the most pressing interest for business men. The spruce deal business in quantity, though possibly not in value, outweighs all other St. Lawrence wood shipments put together, and therefore calls for primary attention. The shipments from Three Rivers and Pierreville above Quebec, and from the Saguenay and all ports below Quebec, are very largely spruce deals, with a very considerable additional quantity loaded at Montreal and Quebec. There are no reliable complete returns of the total St. Lawrence spruce shipments, but from such partial returns as are available, the shipment during the past year has largely exceeded that during the previous one. This was in response to an improved demand at an advanced price from the United Kingdom. From recent advices this has been for the present rather more than sufficiently supplied, but the St. Lawrence shipments by no means are entirely responsible for this, as spruce from the Maritime Provinces, whitewood from Riga and other ports of the North of Europe, and even cargoes from Galatz, always pour in to meet the advanced price that goes with an improved demand for cheap wood for packing case making, the building of workmen's houses or similar purposes. Meantime general business is good and promises to continue so, and a good consumptive demand is even more important than a somewhat increased supply. Possibly affected by the advanced bank rate and heavy shipments, prices have gone back somewhat from the level they reached, but the market will no doubt recover if shippers give it a fair chance of doing so. Meantime manufacturers assert and to all appearance with good reason, that they cannot profitably produce spruce deals at any reduction on last season's prices, in view of the enhanced value of limits, the increased cost of labor and the general advance in all lumbering expenses. It seems probable that if the market is not fully maintained many mills will find it more profitable to cut boards for the United States market and for consumption in Canada itself, than to saw deals for export.

White pine deals, sidings and boards are certain to continue to advance in price under pressure of the American de-

mand. The export shipment shows some considerable reduction on preceding year, and still more on former seasons. This is most marked in the case of deals, the cutting of which has been abandoned by many of the Ottawa Valley mills. Those that still contemplate cutting are holding their coming season's production at an advance of ten per cent. over anything previously paid, and state that at any smaller advance they cannot continue to produce deals, but must follow their neighbors in cutting boards. Red pine deals will not be made to any extent as the product of the log is worth more on this side of the Atlantic than it is at present on the other against Swedish and Russian redwood competition.

The wintering stock of timber in the hewn log has never been so light in Quebec since records were first kept. The comparative statement of stocks wintering stands as under as against recent years. The light supply and good demand during past season, especially in waney and square white pine and oak, has left little on hand for spring shipment. All quantities are given in cubic feet:

	1904.	1905.	1906
Waney Pine.	1,268,987	1,174,287	267,536
Square Pine	347,067	289,317	81,375
Red Pine	55,561	21,039	20,675
Oak	665,670	498,762	325,890
Elm	322,778	360,531	404,095
Ash	25,145	5,260	1668

As recently as twenty-eight years ago the quantities were widely different as shown below:

1878, white pine, 3,179,720 cu. ft.; square pine, 15,113,563; red pine, 1,723,760; oak, 2,070,498; elm, 652,744; ash, 450,612.

The estimated production during the present winter will be generally moderate, and manufacturers are only making under the inducement of high prices. The prospective demand from the United Kingdom is quite satisfactory for both waney and square white pine. Red pine is going out of production and consumption alike. The demand for oak is good at advanced figures, and the combined stock and production may be insufficient to meet the anticipated consumptive demand, more especially as sawn oak scantlings cannot be obtained from the States of suitable specification and quality, even at the advanced prices which are freely offered for the supply of the requirements of the English and Scotch railway companies. Ash is wanted, but cannot be obtained in Canada to any considerable extent. Rock elm shows some dullness owing to a large production under the inducement of high prices last winter, when the weather and other conditions were exceptionally favorable. The correspondingly large shipments have for the moment over-supplied the home markets. The reduced production of the present winter should help to right matters, and meantime elm maintains its value in Canada, as suitable standing timber becomes increasingly scarce and cost of manufacture advances. Birch was much too largely made last winter and time is required for the present very heavy stocks in the United Kingdom to work off.

There is every reason to anticipate satisfactory business next season generally. Dear money may induce buying only for business requirements, but if present trade activity continues the goods will eventually be wanted for absolute consumption.

New Brunswick Cedar Shingles

By A. C. DUTTON.

A. C. Dutton.

THE so-called New Brunswick cedar shingles are produced in the Province of Quebec, south of the St. Lawrence river and east of the Temiscouata Railway, the Province of New Brunswick, and the State of Maine. In no other sections of Canada or the United States grows as fine white cedar as the section of the country named, and the shingle production of this section is in demand wherever once introduced, under the name of "New Brunswick" shingles or "Eastern" white cedar shingles. The annual production averages about 1,250 million, of which probably 900 million find a market in the United States, and the residue—mainly the lower grades—in Eastern Canada.

Owing to the nature of the cedar these shingles are made from, it has been found desirable in marketing them to have them sorted into a greater number of grades than any other shingle timber seems to be capable of. The standard grades are as follows:

Extras—Are perfect for the entire length,—free from all defects.

Clears.—Same as Extras for 6 inches from butts and must have also reasonably sound tips.

2nd Clears.—Will allow sound knots in the butts.

Clear White.—Show no knots for 6 inches from butts and contain a large percentage of shingles absolutely free from knots. Sap is not, however, considered a defect.

Extra No. 1s.—Are shipping culls.

The Extras and Clears are mainly shipped to the United States. The United States market also uses a portion of the 2d Clears and Clear Whites. The residue of the two latter grades is consumed in Eastern Canada. Very few of the Extra No. 1s. find a market at any great distance from home. This grade is used locally for barns and out-buildings. At the present time Extras and Clears are in greatest demand and Extra No. 1s. are in greatest supply.

The market for "New Brunswick" Cedars is limited by the geographical location of the raw material or standing timber and the resultant freight rates to Eastern Canada, New England, and Eastern New York State. Practically all other varieties of shingles find their market east of the point of production, whereas the exact contrary rules with the "New Brunswicks" and they move west for a market. It thus transpires that any effort to extend the present market meets with failure, for the reason that in going further west "New Brunswicks" are immediately submitted to greatly higher freight rates, whereas the competitive shingle receives the advantage of material reduction in freights. There is therefore no future prospect of any increased market as the above conditions will inevitably rule. The limited market area is—coupled with the fact that consumption runs by seasons—one of the causes of the great fluctuations in price of this commodity.

Another cause of price changes is the competition from red cedars made on the Pacific Coast. If red cedars are low, New Brunswicks must follow, as in many localities the two varieties are interchangeable to a certain extent. Furthermore the New Brunswick shingles are, as above stated, very limited in market area and cannot afford to lose any part of their present outlet. In the New England market, taking into consideration the difference in count between the "Reds" and the "Whites," the latter usually sell from five to ten per cent. less than the "Reds." This is not because of inferiority, as the average consumer in this market believes the "Whites" the better and more durable shingle, but because of the more limited market of the New Brunswick product and the absolute necessity of holding the present outlet. The Eastern shingles are, as compared with the red cedars, generally more smoothly sawn, edged and butted, and more attractively put up. Still all Eastern manufacturers should take great care to maintain, and if possible to improve, present standards.

The coming year promises to be highly satisfactory from the producers' standpoint. At present prices are being well maintained, and this would indicate later advances, for Januray and February are the dullest months in the year and the months most likely to witness an easing off in prices.

The British Columbia Shingle Industry in 1906

By H. H. SPICER.

It can be safely stated that at least three important features characterized the British Columbia shingle industry during the year 1906.

Probably the most important of these, and the one which has entailed the greatest difficulty and actual loss of money to the manufacturers, has been the impossibility for the most of them to obtain anything like an adequate supply of timber to enable them to operate their mills steadily; and connected with this scarcity of timber the mills have paid higher prices for it than ever before in the history of the trade in this province.

The manufacturer of any product on a fairly large scale knows what it means for his plant to be closed down at frequent intervals of days and weeks together. These frequent shut-downs of manufacturing plants add materially to the cost of production of the article being made, as numerous fixed charges are all the time going on, and further, more customers become dissatisfied through having to wait unreasonably long for shipment of their goods, and if they can place their orders elsewhere frequently sever their connection with a manufacturing concern which gains the reputation with the trade of being slow shippers. The dealer will not stop to consider the cause of the slow forwarding of goods on the part of any such unfortunate shipper, but simply cancels his order, and places it elsewhere, with probably no better results for himself; and inwardly says that he made a mistake by not giving the shipper with whom the order was first placed a little more time.

Two principal causes have contributed to this shortage of timber for the shingle mills during the past season, namely, the impossibility of keeping anywhere near a sufficient number of men in the woods, notwithstanding the fact that woodsmen's wages have been higher than at any previous time, and also the inability of the mill people to procure tug boats to tow their booms and scows. This latter feature has been so serious during the year that some of the larger manufacturers are thinking about securing tug boats of their own, and the smaller mills are considering the wisdom of joining forces, and building tow-boats for themselves.

Before leaving the question of timber supply, it may be well to mention that it will only be a matter of a very few years when the cedar timber on Burrard Inlet and elsewhere within a radius of thirty miles from Vancouver will be so far back from tide water as to make the handling of either shingle bolts or logs impractical; and as a result of this the large shingle manufacturers will have to put in additional power and machinery for making shingles from logs. The small manufacturers with from one to four machines will likely manage to keep their mills going on shingle bolts without having to move them from the neighborhood of Vancouver.

The scarcity of labor in the shingle mills, however, has been about as keenly felt as in the woods, while with some of the larger manufacturers, it has proven a most serious drawback to the steady operation of their mills when supplies of timber were on hand. I believe that the greatest trouble has been to get steady and competent sawyers and packers, and when crews of these men were got together, they were very hard to manage, generally being ready to leave their work and walk out of the mill for a very trivial reason and sometimes for no reason at all. And it is also a fact that it has been more difficult to get sawyers and packers to do good work this year than during past seasons, they having frequently given the proprietor to understand that if the work they were doing was not satisfactory he could get a man in their place, that they could easily get another job. And all this trouble notwithstanding the fact that shingle mill-men have been paid the highest wages in the history of the shingle manufacturing business in this Province.

The labor problem as affecting British Columbia is a large and serious question, Mr. Editor, and requires the careful consideration of our Dominion and Provincial Governments. The labor unions and politicians here loudly proclaim that no cheap labor is wanted in this province. In answer to this, I should like to ask how it can be expected that men will invest their money in industries in this province and be forced to pay relatively higher wages than similar industries in other parts of the country? We have the opinion of our present Governor-General, Earl Grey, and of Mr. Byron E. Walker, general manager of the Canadian Bank of Commerce, that British Columbia far more than any other province of the Dominion requires cheap labor to clear the land, make roads, pick the fruit, engage in domestic service, and last but by no means least, perform a great deal of work in the woods and mills in connection with the lumbering business.

Before leaving the labor question, I should like to refer to this so-called Hindoo invasion of British Columbia over which so much trouble and noise has been made by certain sensational newspapers, politicians, would-be politicians, and labor agitators. From what has been published broadcast in a portion of the press, I have no doubt but the people of Eastern Canada believe that the Hindoos have been arriving in the Pacific province in almost countless thousands, and that the whole western country is over-run with them. I cannot think of any question which has in any way affected a small portion of the people of this section of British Columbia about which there has been more gross misrepresentation than has been the case about the comparatively small number of these people which has reached our shores during the last few months. Now, the truth concerning this question is shortly this: Since August last not over two thousand Hindoos have arrived in British Columbia, and at the present time they are all at work excepting about fifty. They have found employment mostly in connection with the lumber business and with railway contractors; I do not know how they are liked by the railway contractors, but I do know that at three or four of our largest lumber mills where a great many of them are employed, they are giving good satisfaction as workers. As a matter of common justice to these people, it should be stated that not a single one of them to the extent of a five cent piece, has been a public charge, and not one of these Hindoos has been convicted of any crime.

From the foregoing it might be inferred that I am particularly in favor of Oriental immigration into this country. Such, however, is not the case, but I am firmly of the opinion that a certain amount of cheap labor is urgently required to assist in developing the varied resources of British Columbia, and I should much prefer to see the supply come from Anglo-Saxon countries, or from northern Europe—failing a supply, however, from these sources, by all means let us have enough of the Orientals to meet the demands of the situation.

The next important feature as affecting

all branches of the lumber business during the year now passed, has been the car shortage, and this has certainly been the worst ever known in the experience of all the shippers of lumber products from Vancouver to San Francisco. The past season has certainly furnished convincing proof that the West, and particularly British Columbia, is in urgent need of greater transportation facilities. If necessary it could be specifically stated how many days, and possibly weeks together at different times during the year, shippers have been practically without cars, and aside from the serious inconvenience to which the consumer of the lumber is put, any one at all familiar with the business knows what it means to handle lumber and shingles over two or three times, and if a manufacturer has not ample piling and shed room, he is forced to close his mill.

The C.P.R. and Canadian Northern appear to be taking strong measures to meet the car shortage situation, as I notice that the former has placed orders for $13,000,000, and the latter for about $5,000,000 worth of rolling stock, a great portion of which I suppose will not be available until 1908. While these large orders for rolling stock by the railway companies may look good to the public, it must not be forgotten that the great transcontinental railways are using up and putting out of commission every year probably hundreds of freight cars and dozens of locomotives.

I believe that it is a question, even with ample rolling stock, whether the C. P.R. with only a single track from Winnipeg to Vancouver will be able to handle the east and west bound traffic during the next few years.

I understand, however, that the lumber and shingle shippers of British Columbia have no conception of what a car shortage is as compared with the situation in Washington. As illustrative of how utterly unable the transcontinental railways having their termini on Puget Sound are to handle the various kinds of freight, permit me to cite two cases in point, viz.: A record was kept as to the exact dates at which 500 cars of lumber and shingles left different points on Puget Sound, and it was found when these cars reached Minnesota Transfer, near St. Paul, that they had travelled at a rate of speed not to exceed one and one-quarter miles an hour. The other case is about a car of wheat, that was evidently shipped soon after harvesting, and it was so long on the way to its destination that the grain actually sprouted and grew out through openings at the door or in the side of the car above the loading line. I am told that the editor of one of the trade journals in Seattle has a photograph of this car of wheat.

Since writing the above, an item has appeared in The Daily Province of this city which confirms the above in relation to the rate of speed at which the railways mentioned in this news item have been handling cars of lumber and shingles from Puget Sound to St. Paul during this year, and if you can spare the space I should like to have you quote it so that eastern purchasers of Pacific Coast lumber and shingles may truthfully know what the shippers of these products have had to contend against during this year.

CAR SHORTAGE MAY RUIN MILLMEN

Many Lumber Plants in Washington are on the Verge of Bankruptcy.

Tacoma, Dec. 19—In the following words Victor H. Beckman, secretary of the Pacific Coast Lumber Manufacturers' Association has wired to J. E. Defebaugh at Chicago, seconding his proposal for a national reciprocal demurrage act:

"The people of the east have no conception of the car shortage on the Pacific coast. Mills have closed down and many are on the verge of bankruptcy. This car shortage has existed thirteen months, and is without excuse. With the largest net earnings a mile of any railroads in the United States and smaller empty car mileage, the Great Northern and the Northern Pacific Railroads added one locomotive each to their equipment in 1905, and these roads have fewer flatcars than three years ago. The average time of movement of lumber from Puget Sound to St. Paul this year is sixty-two days, or about one mile an hour. Upwards of sixty thousand carloads of lumber and shingles are lost to Oregon and Washington this year on account of this situation. If the running time should be increased to half stated working time-table the two roads would earn enough additional money to double-track their entire systems in four years, without additional rolling stock or motive power. The policy of the railroads seems to be to destroy the present prosperity for stock jobbing purposes."

I also notice a press despatch from Minneapolis, in the News-Advertiser, Vancouver, of this morning, December 20th, that the Inter-State Commerce Commission has actively taken up this question of car shortage, and I think it would now be in order for the Railway Commission of Canada to carefully look into the matter as affecting Western Canada.

Some statistics in relation to the shingle industry of the Pacific Coast may be of interest to your readers.

There are at the present time in British Columbia thirty-two different concerns engaged in the manufacture of shingles. These different mills are equipped with about one hundred and fifty-three shingle machines, making somewhat over three million shingles per day of ten hours, or a total yearly capacity of about nine hundred million, assuming of course that all these machines are operated steadily during 300 days of the year, which for various reasons is not possible.

The record of shingle shipments for this year is not complete, but I think the total for the year will be about 600 million, probably 50 million more than for 1905. Of this six hundred million about 450 million have been consumed by the Canadian trade, the balance going to the United States. I estimate this year's shingle shipments at ten to fifteen per cent. over 1905. At the average market prices which have prevailed this year these shingles would represent a value of about $1,000,000.

To get large shingle figures, however, we must go south of the boundary to the Pacific Coast States. There are five hundred and fifteen shingle mills in Washington, thirty-eight in Oregon, and thirty-one in California. Many of these mills have different kinds of shingle machines, from the upright Dunbar type with a capacity of 20,000 to 25,000 per day, to the Ten Block with a cutting capacity of about 200,000 a day.

The shingle shipments from the Pacific Coast States are not yet to hand for this year. During 1905, however, Washington shipped 37,000 cars, which at an average of 175,000 to the car amounts to nearly 6,500,000,000 shingles. California redwood shingle shipments during last year were 784 million. Nearly all the latter were consumed in the State of California.

No figures of Oregon shipments are at hand.

The Washington shipments this year will likely run to about 40,000 car loads; or at 175,000 per car, 7 billion shingles. I should say that these shingles have represented a money value to the State of about $12,250,000.

I do not know what the average yearly output of the shingle producing section of Canada and the United States outside of the Pacific Coast may be, but I think it is pretty safe to state that about 75 per cent. of all the shingles used in Canada and the United States are manufactured in British Columbia, Washington, Oregon and California.

QUICK LOADING.

What we believe is a record in the loading of lumber on a vessel was accomplished by Messrs. Pitts & Charlton, at Victoria Harbor, in November last. In 19 hours they loaded 896,000 feet of lumber on the barge "Our Sun," the property of the Robinson Bros. Lumber Company. The loading facilities at Victoria Harbor are excellent, and we doubt whether this record has been equalled by any other firm in the Georgian Bay district; if so, we would be glad to receive the particulars.

DUTY ON PACKING CASES.

A delegation of workingmen employed in the manufacture of packing cases interviewed the Dominion Government last month and asked that the duty of 10 per cent. imposed under the new tariff, but which has been objected to by some importers, should be retained. It was represented that without a duty imported packing cases would enter into competition with the Canadian article, as when emptied of their contents they are sold at a reduced rate.

THE

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AND WOOD-WORKER

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THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in every part of Canada in the lumber, wood-working and allied industries. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication in the WEEKLY LUMBERMAN the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN AND WOOD-WORKER is undoubtedly the most direct and profitable advertising medium. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

THIS NUMBER.

With the completion of this Annual Trade Review Number we confess to a consciousness of modest pride inspired by success. Napoleon said "success belongs to the most persevering." In our efforts to produce a number of the CANADA LUMBERMAN AND WOODWORKER which, even for a Special, would mark another step in advance, we have been guided by this motto. For the success achieved, however, we do not claim all the credit. The assistance given by the lumber trade at large, the many interesting articles by well-known authorities, and the liberal advertising patronage extended by the lumber and machinery manufacturers and others, have contributed in no small degree towards the gratifying result.

The work which this number represents dates back many months, for it is only by taking time by the forelock that it is possible to produce so greatly enlarged an edition of a publication without disturbing the regular order of things.

The number of advertisers in this issue, representing the most enterprising firms in the lumber and machinery and allied fields, is evidence of the satisfactory results that are invariably obtained by judicious advertising in a medium of recognized merit and wide circulation. The CANADA LUMBERMAN AND WOOD-WORKER covers the Dominion, from the Atlantic to the Pacific. We are reaching for the four thousand mark and hope to have that number of subscribers on our books before the close of 1907.

This number, good as we think it is, does not mark the culmination of our efforts to produce the best in lumber trade journalism. On the contrary, we feel encouraged in the direction of greater things in the future, which we hope, with the co-operation of the trade, to accomplish.

The reader, when in the market for machinery or supplies, should consult our advertising pages, that he may know of the most modern improvements, and then should not neglect to make known to the advertisers the fact that his enquiry is the result of a perusal of the CANADA LUMBERMAN AND WOODWORKER. In this way he may do much towards strengthening the hands of the publishers.

If you think favorably of this number, let us know about it, or tell us how in your opinion it could have been improved. We will endeavor to profit by your suggestions.

COMMERCIAL AND INDUSTRIAL PROGRESS IN 1906.

The year 1906 was exceedingly kind to the optimist, for it must indeed have been an unreasonable prediction that did not find realization in the wonderful progress made in all branches of Candian trade and commerce. The exports and imports speak more strongly than words. The latest complete statistics are for the year ending June 30, 1906, but the showing for the calendar year would doubtless be still more favorable, inasmuch as there was a continued expansion of business. The exports have doubled since 1896, reaching in value $256,586,630 last year, an increase of $53,000,000 over the previous year. The imports were $290,360,807, an increase of $28,000,000 over 1905.

Of the exports Great Britain took $133,094,937, and the United States $97,806,552, while the import figures show that the United States supplied goods to Canada to the value of $175,862,071, against $69,194,588 imported from Great Britain. The Canadian exports of of the products of the forest were valued at $38,824,170, figures which show the magnitude of the lumber industry.

A vast amount of railway construction was carried out last yeer, the magnificent distances in Canada making this one of the most necessary features in the development of the country. In this work, as well as in lumbering operations, the great drawback was the inadequate supply of labor. Not only was it impossible to obtain sufficient men for railway construction and woods work, but there was a marked depreciation in the class of labor, making it necessary to employ a larger number of men than formerly for the same volume of work.

In the lumber industry the conditions, other than the labor supply, were almost ideal from the manufacturer's standpoint. His product was always in demand at good prices—it was essentially a market controlled by the seller.

The cost of production, however, has increased to such an extent that the margin of profit was not great. The outlook for 1907 is that the business of the year will be of large volume. There is no indication of a turn in the tide of prosperity, no prospect of a smaller consumptive demand, for in all the cities and towns the cry is for increased housing accommodation. We donot anticipate more than very moderate advances in the price of lumber and other building material, as it is recognized that a continuation of extensive building operations depends in no small degree upon the cost.

INSPECTION OF LUMBER CAMPS.

It does not appear to be universally known by lumbermen that new regulations for the sanitary control of lumber and mining camps in Ontario, and the medical care of the employees, were approved by the Lieutenant-Governor in Council, September 17th, 1906. To the knowledge of the writer, two large operators were ignorant of the changes that had been made, and proceeded to engage a doctor as a compulsory duty as heretofore. Did the Government send a copy of the new regulations to the head offices of the lumber firms?

Under the new regulations every employer of labor in any lumbering, mining or construction camp must contract with a physician for the sanitary supervision of camps, and such physician shall inspect the same at least once a month, or oftener if, in the opinion of the Chief Health Officer, it is necessary to do so. This expense, as we understand it, must be borne exclusively by the employer.

In addition to the above requirement, which is practically unchanged, lumbermen were formerly obliged to contract with a physician for the medical care of employees. This is now left optional with the lumbermen, who, instead of contracting with a doctor, may assume the responsibility for the medical care and maintenance of employees taken ill. The following extracts from the new regulations cover the point:

"Every employer of labor on any work other than a lumber camp shall contract with one or more duly qualified physicians for the medical and surgical care of his employees; and may deduct from the pay due any employee a sum not exceeding $1.00 per month, which shall be paid to the physician or physicians so contracted with, and every such physician shall supply medical attendance and medicine to the employees."

"Every employer of labor in a lumber camp may contract with one or more duly qualified physicians in the manner hereinbefore provided, and in that case may proceed in the manner authorized by the said Regulations, and every physician so contracted with shall possess the power and perform the duties set out in the next preceding Regulation, but every such employer who does not contract for the medical attendance of his employees shall be responsible for the medical care and maintenance of each and every employee taken ill while in his employ, and shall incur a like responsibility for each and every case of sickness which develops after quitting his service or after being discharged from his employ, when, in the opinion of the Provincial Board of Health, the origin of such sickness is traceable to the period of such employment, or to an accident occurring while in such employ, when the sick or injured person is not able to pay or does not pay for the same — the apportionment and adjustment of expenses so incurred to be determined according to Sec. 3, Chap. 34, I Ed. IIV."

Most lumbermen will probably take advantage of the option provided by the second clause, for when given a free hand they can make an arrangement which will be more satisfactory to the men. In the past the burden has fallen on the employers, the men frequently objecting to the deduction of fifty cents or one dollar per month from their wages, and if the law were insisted upon they would leave. This, owing to the great scarcity of labor and the consequent necessity of retaining employees, has made it very difficult to enforce the contract for compulsory medical attendance.

A Summary of Lumber Trade Conditions in Great Britain

The timber trade of Great Britain in 1906 was somewhat uneventful, although there was a general tendency towards a higher range of values. The season opened under favorable auspices, but the increased cost of lumber curtailed the consumption of high grade stock and created an enlarged demand for cheaper substitutes. On the whole, however, the year was a prosperous one. Compared with the totals of either of the two previous years, the import shows an aggregate excess of some 185,000 standards of sawn and planed wood, of which surplus Russia is separately responsible for 60,000 standards, Sweden for 30,000 standards, Norway for 25,000 standards, and Canada for 44,000 standards. Yet large as the past year's import appears in comparison with 1904 or 1905, or indeed with even the average of the five preceding years, which it exceeds by nearly 5 per cent., it must be remembered that some increase was required to replenish stocks which had been depleted by an unusually small importation for two seasons in succession.

The total importation of timber into Great Britain last year was 10,358,400 loads of 50 cubic feet, or 6,215,040,000 feet board measure. The value of the import is placed at £27,511,279. These figures will convey to the reader some conception of the magnitude of the timber consumption of Great Britain. The Board of Trade returns give the following statistics of the import into the United Kingdom during the past three years :

	1904. Loads.	1905. Loads.	1906. Loads.	Value-1906.
SAWN AND PLANED :—				
Russia	1,963,536	2,120,520	2,317,560	£5,973,305
Sweden	1,515,556	1,522,399	1,631,363	4,003,067
Norway	493,932	499,127	584,681	1,652,423
United States	580,701	490,632	513,081	2,049,966
Canada	1,280,598	1,160,169	1,425,112	4,188,386
Other Countries	231,839	192,938	220,463	666,811
	6,066,162	5,985,785	6,692,260	£18,533,958
HEWN :—				
Russia	279,249	244,887	255,665	£655,783
Sweden	33,647	20,108	28,111	54,800
Norway	56,009	54,278	44,045	93,248
Germany	126,514	134,968	149,118	477,568
United States	172,555	147,798	167,280	875,527
British East Indies	30,879	39,636	35,462	589,169
Canada	51,798	60,481	73,539	481,009
Other countries	24,710	36,904	37,905	473,605
PITPROPS	2,332,577	2,120,116	2,451,669	2,713,004
	3,107,938	2,859,176	3,247,786	£6,413,713
Staves of all dimensions	132,178	119,182	139,041	£632,568
Mahogany (tons)	103,770	96,428	84,101	723,999
Other Furniture Woods,&c.(tons)	197,937	197,111	195,212	1,207,041
	433,885	412,721	418,354	£2,563,608
Grand Total	9,607,985	9,257,682	10,358,400	£27,511,279

LIVERPOOL STATISTICS.

The importation and stock of Colonial timber at Liverpool in the last three years was as follows :

	1904.-C.Ft	1905-C.Ft.	1906-C.Ftt.
LIVERPOOL IMPORT:			
Colonial Timber	2,153,000	2,384,000	3,553,000
Colonial Deals	21,851,000	21,682,000	26,203,000
Total	24,004,000	24,066,000	29,756,000
LIVERPOOL STOCK.			
Colonial Timber	783,000	599,000	719,000
Colonial Deals	4,634,000	4,107,000	4,013,000
Total	5,417,000	4,706,000	4,732,000

LONDON STATISTICS.

The London importation of deals in the past three years is given as follows :

	Pieces 1904.	Pieces 1905.	Pieces 1906.
Quebec Pine Deals, &c.	1,182,000	738,000	898,000
Quebec Spruce Deals	2,110,000	1,764,000	1,767,000
Quebec Birch Deals	92,000	162,000	217,000
N. B. Spruce Deals	786,000	604,000	389,000
N. B. Birch Deals	131,000	239,000	255,000
Total, in pieces	4,301,000	3,507,000	3,726,000

Concerning the course of prices of pine and spruce deals, Messrs. Foy, Morgan & Company, London, Eng., say :

PINE.—Every year that passes helps to make this wood more of a luxury. Wholesale prices continue to rise. Last year the Ottawa stocks were sold at an advance of from 5 to 10 per cent., and it is reported that another advance of 10 per cent. will be asked for next season's production. Although necessarily limited, the business done in the past season has been a satisfactory one, the basis c. i. f. prices for regulars having been about £32 and £21 for 1sts and 2nds, £12 5s. rising to £13 5s. for 3rds, £9 10s. rising to £10 10s. for 4ths. The demand this autumn has especially centred on 3rds and 4ths. As the wintering stock is abnormally small, prices for spring shipment are bound to be very high.

SPRUCE.—The Quebec productions were disposed of at uniform prices throughout the season on the basis of £9 for 9-inch 3rds, and £8 for battens, thus an advance of 10s. on deals and 15s. on battens on prices current during the previous summer. Selling, however, proceeded much more slowly than might have been anticipated in view of the avidity with which buyers were competing for Baltic whitewood on which the rise was so much greater. The import into London has been slightly larger than in the previous year, but includes a less proportion than usual of shipments from the lower ports. Notwithstanding this, consumption has been so poor throughout the year that the dock stock is now materially larger than it was at this time last year. During the autumn very heavy shipments of lower port Spruce have been made to the West Coast ports, as the result of which prices have sharply receded and stocks are now more than ample.

RED PINE.—This trade has been carried on almost exclusively on a consignment basis. Transactions on c.i.f. terms were occasionally reported in lengths and sizes especially intended for railway orders. The market has been an unsatisfactory one, the more so as shippers seem able to send little else than 3×9 and 3×11, the values of which have been especially depreciated in common with the same sizes in Baltic stocks.

Messrs. Farnworth & Jardine, Liverpool, report in reference to sales as follows :

WANEY PINE.—The arrivals have been chiefly on contract, but consignments have been sold as follows, viz : 1st class, 18 to 19 inches averages, at from 2s. 9d. to 3s. 0d. per cubic foot ; mixed quality, 16 to 19 inches average, at from 2s. 3d. to 2s. 9d. per cubic foot. 2nd class, 16 to 21 inches average, at from 2s. to 2s. 9d. per cubic foot.

SQUARE PINE.—Fair average at 22d to 2s. 2d. per cubic foot.

QUEBEC OAK.—60-80 feet average cube, at 2s. 9d. to 2s. 11d. per cubic foot ; some consignments of 2nd class and mixed quality at from 2s. 3d. to 2s. 8d. per cubic foot.

QUEBEC BIRCH.—14½ to 16 ins. average, at from 1s. 4d. to 2s. per cubic foot ; St. John, 14 to 14¾ ins. average at from 17¾d. to 19d. per cubic foot. Miramichi has not been reported. Lower Port, at from 15d. to 17d. per cubic foot. Birch Planks, at from £7 to £8 per standard.

NEW BRUNSWICK AND NOVA SCOTIA SPRUCE DEALS.—St. John have ranged from £7 10s. to £8 5s. per standard ; Miramichi, Dalhousie and Bathurst, at about the same rate. Parrsboro' (West Bay), Halifax, Campbellton, Grindstone Island and similar, at about 2s. 6d. to 5s. per standard, and Baie Verte, Pugwash, &c., at about 7s. 6d. to 10s. per standard less than St. John.

NEW BRUNSWICK PINE DEALS.—Miramichi, 3rd quality, at from £7 15s. to £8 5s. per standard ; 4th quality, at from £6 15s. to £7 10s. per standard.

SPRUCE SCANTLINGS AND BOARDS.—With the cargo at about 20s. per standard reduction, but separately at somewhat better prices.

QUEBEC PINE DEALS.—The arrivals have been largely on merchants' account. 1st quality regular specification, 3×11, at from £32 to £34 per standard ; 1st quality oddments, at from £23 to £26 ; 2nd quality regulars at £20 10s. to £22 10s. ; 2nd quality oddments, at from £15 10s. to £16 10s. ; 3rd quality regulars, at from £13 to £14 ; 3rd quality oddments, at from £11 10 s. to £12 10s. ; 4th quality at from £10 to £11.

Red Pine Deals, at from £10 to £12 per standard. Red Pine Boards, at from £9 to £10 per standard.

Quebec spruce, 1st quality at from £13 to £16 per standard ; 2nd and 3rd quality Spruce, at from £7 10s. to £9 ; 4th quality spruce, at from £6 5s. to £7 5s.

Review of the North-Western Lumber Field

(By Our Winnipeg Representative.)

The lumber situation in Northwestern Canada has been rather complicated, due to the paramount fact that prices for all grades of lumber have steadily risen during the past year. The wonderful building progress throughout the Northwest during the past two or three years has created an abnormal demand for lumber, while the railway construction during the past year has also taken large supplies of lumber and timber, and will continue to do so for many years to come.

Practically all of the lumber brought into the city of Winnipeg, estimated between 150 and 170 million feet, is used in the city itself, very little being re-shipped. The building returns of Winnipeg amounted to $9,000,000 in 1904, $11,000,000 in 1905, and close upon $13,000,000 for 1906. These figures alone will convey an idea of the immense amount of lumber used in over 10,500 houses erected in the city of Winnipeg during the last three years. The great majority of these houses were constructed of lumber.

The retailers claim that the general condition of the retail trade in Western Canada during 1906 was fairly satisfactory. They say that the supply met the demand very well, except in the case of new yards which were not able to get prompt shipments.

Many retailers wait until the last moment before getting in a stock of lumber, some doing so in the hope that prices may drop, but it is a well-known fact (and a saying here) that "lumber is as good as gold," and not likely to deteriorate in quality or price.

As regards lumber from the United States, very little was brought in during the past year owing to the fact that the lumber market over there was better than on this side of the line.

The retailers have had several just complaints to make against the railways owing to car shortage and delayed shipments. This appears to be a hard matter to regulate.

The retail lumbermen in Manitoba, Alberta and Saskatchewan are more and more going into the business of handling building supplies. A large number of them find it very profitable to handle cement, lime, plaster, brick, building paper, etc.

The railways have come in for some hard knocks from the different shippers, owing to the great delay in bringing in the Pacific Coast product. A prominent Winnipeg dealer states that the cause of the delay is the fact that the Canadian Pacific Railway and the overland lines south of the boundary have too much business for their single tracks, and the roads cannot begin to take care of the business properly.

The cause of the rapid advance in the prices of lumber are becoming well understood by the retailers. Regarding the prices in Winnipeg, Mr. D. E. Sprague, president of the Sprague Lumber Company, says that as far as lumber is concerned it is much cheaper in proportion just now than most other things in Winnipeg. He states that there is perhaps no place in Canada where competition is so keen and prices so close as in Winnipeg.

Some of the parties whose talk has been strong about an alleged combine among the retailers as well as the mills are companies which are not admitted to the different associations because they wish to do a pirating business by selling to contractors, farmers, etc., direct, which would be unfair to the legitimate dealer.

When the lumber mills in Michigan began to "peter" out for lack of logs a number of them turned their attention to producing salt, using the exhaust steam of the mill to pump the salt from their wells in the neighborhood. Now, it is being shown that there are large quantities of salt in Northwestern Canada reaching as far north as Fort McMurray aad the Athabasca river, which will no doubt be reached in the course of time.

The capitalization of the Beaver Lumber Company, Limited, of Winnipeg, at three million dollars shows that a great company is to be formed. This concern amalgamates and takes over the Prairie Lumber Company with a large string of line yards, the Gibson Lumber Company, with its retail branches, the Porto Rico Lumber Company, with its plant, large planing mill and woodworking factory in Moose Jaw, together with the mills at Ymir and Moyie, B. C.

In reply to a representative of the CANADA LUMBERMAN, Mr. C. J. McCollom, of the McCollom Lumber Company, wholesale dealers in lumber, Winnipeg, states that his firm looks for the most active trade in all kinds of building material yet experienced in the history of Northwestern Canada unless the manufacturers advance prices too much. The total increase in the price of lumber has been exorbitant during the last ten months, he thinks, and any further advance is sure to reduce the consumption more or less. Mr. McCollom when in Ontario lately was told by a dealer who had handled over 80 cars of B.C. shingles during 1906, that owing to the heavy advance he expected trade to fall off fully one-third. New Brunswick shingles now being cheaper in Ontario than B. C. shingles. Another effect, he thought, would be the substitution of sheet metal and other roofing for shingles. He instanced the case of a farmer who was building a large barn and was using sheet metal, while before the advance he intended using shingles. Mr. McCollom thinks that the advance is unfortunate for the farmer whose wheat is worth less than a year ago.

Owing to shortness of stock and an unprecedented demand a few of the mills withdrew their travellers, and even cut out the commission men, simply sending one of the office staff when they had something for sale. A commission man states that he went through Alberta and Saskatchewan, taking with him what he thought was a reliable stock list of material on hand at the mill. He booked seventy-eight carload orders, and was chagrined to find that not half of it could be supplied when he joyfully turned his orders in. He blamed the mill for not keeping him posted, but the mill said that owing to the rapid-fire system of orders they were run short before they know where they stood.

THE WESTERN RETAILERS.

Mr. Isaac Cockburn, Winnipeg, the veteran secretary of the Western Canada Retail Lumbermen's Association, and secretary of the Lumbermen's Fire Insurance Company, in the course of an interesting interview, said:

"Retail dealers established prior to 1906, while often handicapped through close shipments, were able to keep their stocks fairly well supplied through having given large orders early in the year. Dealers who commenced business during the year met with serious difficulty in procuring a stock of lumber for their yards. This was especially so where the supply was dependant upon the spruce manufacturers, and in the expiring months it was practically unobtainable.

"Then again the newly opened yards on the Edmonton line of the Canadian Northern Railway were subjected to the most vexatious delay when bringing in British Columbia lumber through the transfer from the Canadian Pacific Railway to the Canadian Northern Railway at Strathcona—so much so that there is an instance of a shipment being three months in reaching its destination. It is hoped, however, that no such delay will be hereafter experienced, as the Canadian Northern will be better able to take care of such freight, and it is also probable that the spruce manufacturers will be able to supply lumber earlier the incoming spring, although they are now without stocks at the mills.

"The frequent advances in prices, almost monthly, during the season have required the retail dealers to exercise much watchfulness to prevent sales being made to the consumers without any margin of profit. However, the large demand for lumber has contributed to the dealers on the whole having a very satisfactory season's business.

The outlook for the incoming season of 1907

may be regarded as similar to the year 1906, and little more promising in the matter of supply, with a demand quite as large if not greater. Indeed, it is possible that no change can be looked for until after the completion of the construction of the several lines of railway now building, which will extend beyond the season of 1907.

"About 90 new lumber yards have been added in Manitoba and Saskatchewan during the year, largely situated along the new lines of railway being operated."

ADVANCE IN PRICE OF WESTERN LUMBER.

Mr. Hugh S. Y. Galbrath, the Manager of the Winnipeg branch of British Columbia Mills, Timber & Trading Company, and who is also Sales Manager for the company, gave the CANADA LUMBERMAN the following interview :—

"The general impression amongst lumber consumers seems to be that lumber is advancing in price altogether too rapidly. On the contrary, however, the fact is that lumber has been sold too cheaply in the past, the manufacturers not having realized the value of the uncut timber, and not looking forward to the time when logs and timber limits would greatly increase in value, owing to the prodigal methods of logging.

"Timber accessible to the water's edge is now almost a thing of the past, and logging in British Columbia has now resolved itself into a railroad or donkey engine proposition, with very costly equipment. As a matter of fact, the price of lumber has not kept pace with the advance in cost of logging and increased cost of manufacture through the scarcity and high price of labor. It is almost an utter impossibility to get a sufficient number of men. When Sir Thos. Shaughnessy was at the Coast a few months ago, a request was made to him by the principal lumber manufacturers to extend the immigration rate, which is now in effect as far as Calgary, and make it operative to British Columbia, with the hope of inducing laborers and mechanics to cross the mountains. White labor is universally preferred to Oriental, and the mill men are quite willing to pay more for white men than for the Chinamen, Japs and Hindoos, on whom they have at present to rely.

"The mills have been greatly handicapped this past year through car shortage and a great many shipments have been delayed on this account. The dealers who ordered their supplies before they were actually needed were in the most fortunate position. With the price of logs soaring, another advance in the price of lumber seems inevitable when the Spring trade opens, and the lumber dealer should place his orders now for immediate shipment in order to get his material in time for his Spring requirements, or otherwise with the great rush all at once, and the inevitable shortage of cars, and the shortage of logs and stock, the orders will be delayed.

"Regarding freight rates, I cannot see any reason why the C.P.R. would haul a car from Vancouver through Winnipeg to say Morden, a distance of of 1,562 miles, for 40 cents per 100, while they charge 45½ cents to Hamiota, a distance of 1,400 miles, or 40 cents to Winnipeg, 1482 miles, and 46 cents to Esterhazy, a distance of only 1342 miles. All these points are on their own line. It surely doesn't cost any more to haul to the north branches, a shorter distance, and the increased rate must be because they have no competition to the north.

"Another point, casing and base are universally known by all lumbermen as "lumber," have always been shown on the lumber price list, figured and sold and shipped as lumber at the lumber rate. The C.P.R., taking advantage of an invidious discrimination made some time ago, charge 75 cents for mouldings and joiners' work, as against 40 cents for lumber, and they now make the absurd and untenable claim that casing and base should be classed as mouldings and take this higher rate of freight. The mill manufacturers are now protesting against this unjust ruling which would make these commodities so much more expensive to lumber consumers. Anyone who is familiar with the purpose for which this lumber is used can see at a glance how absurd is the railway's contention that it should be classed as mouldings.

MR. HUGH S. Y. GALBRATH,
Manager Winnipeg Branch British Columbia Mills, Timber & Trading Company.

"Our company are working great improvements, putting in the other side of the Hastings mill, and as we expect to run this mill night and day if we can secure an adequate supply of logs, this will give us a capacity of 500,000 ft., b.m. per day, at this one mill. In addition to our Royal City mills, New Westminster and Woodsville mills, we are operating five small mills on the line of the V.W.O.Y., which assists us in making car shipments promptly. We are building two new tugs at a cost of $100,000 and greatly improving our camps."

THE WESTERN OUTLOOK.

Mr. W. T. Creighton, Vice-President of the Alex. Black Lumber Company, Winnipeg, speaking to a representative of the CANADA LUMBERMAN, said :—

"Regarding the lumber outlook, I cannot see anything that indicates cheaper material for next season. In the past the closing month of the year has generally been marked by a reduction in prices to some extent, but in 1906 there was a sharp advance in December from British Columbia Coast points, on both lumber and shingles, and while the aggregate capacity of the mills there has probably been doubled, in the last three years, there is no doubt but that at present, with the log shortage and the abnormal demand in general and for railroad purposes, it is just a question of how much higher prices may go.

"Regarding freight rates generally, I think the short haul rates are proportionally much the highest on a mileage basis ; and taking the rate on fir from Pacific Coast points, I consider them to be reasonable, being very little more than the transportation company's own rate to themselves, on material required for their construction purposes, which is supposed to cover actual cost and no more. I do not look for any reduction on this rate at present, but on cedar lumber and shingles, and on material from interior points in British Columbia coming east, there is room for a re-adjustment of rates. Car shortage, and the old system of demurrage charges, which was only figured one way, i.e., in favor of the transportation companies as against the public, are matters which I think will be taken care of by the present Railway Commission, protecting the public to a reasonable extent."

HARDWOOD LUMBER IN THE WEST.

The north-western trade depends largely on the supply of hard woods coming from the United States. A number of firms are catering for this growing trade. The demand comes from woodworking plants, furniture and wagon manufacturers, planing mills, etc.

Speaking of the hardwood market in the west, Mr. J. W. Ackland, of D. Ackland and Son, hardwood wholesalers, of Winnipeg, says :

"During the past year the hardwood situation has been very unsettled, and prices on some lines, notably plain oak and white ash, and also hickory, have advanced from 10 to 25 per cent., and stocks are extremly hard to procure even at the advanced prices.

"Fancy woods have been somewhat easier and stocks more plentiful ; the shortage can be attributed more to climatic conditions prevailing in the south than to the scarcity of timber. For the past two years there has not been any prolonged spell of good weather, but instead continuous rains, which have kept the timber country practically in a flooded condition, making it impossible for mill men to operate their plants.

"In some districts they did not operate more than six months out of the last twelve. This condition still prevails, and I am inclined to think that it will have more effect on next year's prices than on the past, and the outlook for the season's business of 1907 in hardwood is anything but promising.

"In the northern parts of Michigan and Wisconsin, from which source our supply of maple, birch and basswood comes, conditions are somewhat different, but will practically have a similar effect on 1907 stocks, that is, the mills and yards have completely sold out, or, as they term it down there, had a 'regular clean up.'

"Green stock will, therefore, be all that can be offered, and until such time as this becomes in shipping condition the prices will likely advance in sympathy. The car shortage which prevails yearly in the south makes it difficult to move stock northward after August, which handicaps us seriously in taking care of our customers wants."

Notes on the Hardwoods, with Some Reference to Inspection

By W. B. BARTRAM.

W. B. BARTRAM.

THE trade in hardwood lumber through Canada is beginning to show indications that it is going to be a very important factor as regards quantity in the general lumber trade of this country. During the past year it has shown considerable improvement in respect to prices, the phenomenal rise in the price of soft wood affecting the price of hardwood to some extent, but, however, not to an extent where the manufacturer and wholesale dealer can as yet make what is called a reasonable profit.

The hardwoods such as are manufactured in Canada to-day, in the most of cases, will not produce the quantity of common and better that will permit a mill man to sell his stock on grade to advantage, owing to the lack of knowledge as to how to manufacture hardwood and the proper care that should be taken of it, and lastly, owing to the prices that are now ruling. Very recently there has been a slight demand for shipping cull hardwood, for the manufacture of boxes, crates, etc. When this demand increases to a point where a dealer can figure on disposing of all his shipping culls at a price similar to the price that is obtained now for soft woods under a similar grade, the great difficulty in the grading of hardwoods will have been overcome.

Manufacturers in some of the districts where hardwood is manufactured to-day are accustomed to sell their stock on grade. These districts are usually better populated, with more industries to consume the lower end of the stock. On the other hand, there are a great many manufacturers who insist upon selling their stock mill run, and in these districts where they sell mill run, there is usually no outlet or demand for the lower end of the stock. Even as a whole to-day, the quantity of lower end hardwoods exceeds the demand by an enormous amount, with a few exceptions.

Basswood, which is classed among the hardwoods, is a satisfactory stock to handle, and has risen to a place second to none in the lumber trade of this country, when it is taken as a mill run stock. The quantity, of course, is very small when compared with other lines of lumber. There is not a grade in this wood for which a dealer cannot find a ready market. Nine dealers out of ten who manufacture or consume lumber use or can use basswood, and it is suitable for many purposes for which the other soft woods of Canada will not answer.

Birch also is beginning to have a very secure place in the market and large quantities of this stock are now being manufactured throughout this part of the country. The most serious drawback to this stock is the same as mentioned before in the No. 2 common or shipping culls, and from the lack of knowledge on the manufacturer's part in taking the stock out properly as the market demands it to-day.

Ash of any quality is becoming so scarce in these parts that it is almost impossible to purchase enough at any one mill to make it worth while for a dealer to grade up his stock for the Canadian or American market. The prices of ash have risen to a phenomenal point, that is, in the Firsts and Seconds and No. 1 Common, but notwithstanding the high price, the demand exceeds the supply.

Soft elm continues to play a small part in the hardwood trade, and the demand as far as the past year is concerned very much exceeded the supply.

Summing up the whole situation regarding these particular woods, from the general aspect of the market during the past year, the trade has certainly had life in it, and any dealer who had good stocks and could make delivery, should have done a good year's business. The outlook for the ensuing year, from all indications, will show an improvement over the past year where good stocks are concerned. Poor stocks are always a drag on the market under any and all conditions in the hardwood trade, and this question cannot be put too forcibly before the manufacturers of hardwoods in this country, and greatly to their own interests.

HARDWOOD INSPECTION.

One of the most serious drawbacks to the hardwood trade of Canada is the lack of any specific inspection. I do not know of any standard inspection that is used universally by the hardwood dealers of this country. Many ship to the United States under the different rules of inspection used in that country; others ship by an inspection made up according to their own ideas. As to Canadian dealers' ideas of inspection there is as much variety on the inspection of any particular class of lumber as there are kinds of wood in the hardwood trade.

The November monthly issue of the Canada Lumberman contains rules governing the inspection of hardwoods adopted by some Western association and you ask the lumbermen and hardwood dealers of this country for their opinions on this inspection with a view, possibly, to having it adopted in Canada as the standard inspection of this country. It is an easy matter to adopt this inspection, and as far as we are concerned, we should like very much to see it done, but the important question arises, can the stock be sold under these rules of inspection in the markets where the large demands are? I very much fear they cannot, and furthermore I do not think that the hardwood dealers of this country would adhere to an agreement long enough to enforce this inspection upon the buyers, particularly of the Eastern States. The National Hardwood rules of inspection are largely used in this country where there is any inspection or attempt at inspection, and there is no difficulty in selling under this inspection on the other side.

I would advocate that the hardwood lumber manufacturers and dealers of this country form an association and adopt the National rules of inspection as the recognized rules on the inspection of hardwood in this country. If at any time these rules are considered too stringent, and we form a strong association in conjunction with the National Association of the United States, we will have a voice in the revision of these rules, when that question arises.

All kinds of time and space have been apparently wasted for the reasons that we do not seem to come down to that active point where results are to be seen. During the past year there has been considerable discussion in the Canadian and American lumber journals on the inspection of hardwood lumber. During the winter months there will be time for all manufacturers and dealers who are interested in hardwoods to have a meeting at some appointed place, when we can form an association of our own and adopt some standard method of inspection, and I would suggest the month of February for that purpose, and the place of meeting at Toronto. I would further suggest that the Canada Lumberman appoint the date and place where the meeting is to be held, giving the lumbermen of this country an opportunity to briefly outline their ideas on the question between now and the date appointed for the meeting, so that those coming to the meeting may thoroughly understand that the meeting will be held for this purpose and that genuine and effective results are desired.

Ottawa, January 2, 1906.

The Cooperage Stock Industry in 1906

By JAMES INNES.

JAMES INNES.

THE output of cooperage stock during 1906 has been very much less than for years past, owing to the low prices maintained during the year 1905, the enhanced cost of raw material (owing to the large demand for elm and basswood lumber), and the increased cost of manufacture caused by the high wages prevailing during 1905 and 1906. The demand during 1905 was light, consequently considerable stock was carried over until 1906, causing the manufacturers to log very lightly, even where they had timber of their own bought in previous years, as they could not see their way to manufacture stock at a profit. Elm and basswood timber is getting higher in price year by year, while the price of cooperage stock has not increased in proportion. Lumber, however, has increased proportionately to the price of the raw material, and consequently a great part of the timber which would go into cooperage stock now goes into lumber, which pays very much better. Some years ago there used to be very little demand for elm, and basswood lumber had to be practically clear. Both elm and basswood are now used for such a number of purposes that a poorer grade of lumber is readily sold, being cut into small dimensions for all classes of furniture, and used in arts and manufactures.

The demand for stock during 1906 has been slightly better than during 1905, but still the consumption has been very much below the average, but from present indications the consumption is going to be greatly increased during 1907.

To take up the principal branches where cooperage stock is used, will give indications where goods go.

The sugar trade last year ran chiefly into bags. This package, however, is very unsanitary, wasteful, and dirty, and consequently the sugar refineries are going more into barrels again, which is certainly the most desirable package which has yet been invented, both from a sanitary point and in convenience in handling.

The flour barrel trade has used more barrels this year than for some years past. This package is not only clean, but easy to handle for flour, and the barrel after being emptied is most desirable for crackers, apples, fish, and other purposes too numerous to mention. The barrel is a first-class one, is perfectly clean, and is even superior to a new barrel made from a low grade of stock, and the customers in the lower provinces realize this, and demand their flour in barrels. In addition to this the loss from rats and other vermin is very large when flour is packed in sacks, and there is also a considerable loss from taint and exposure.

The salt trade has been very good throughout the year, and as salt is one of the most delicate articles to handle on account of its liability to absorb taint of any kind, whether from cars which have contained petroleum, spices, or any highly smelling article, the barrel has been found the only sanitary and satisfactory package for salt, and as the consumption of salt increases the consumption of cooperage stock will also increase.

The lime trade has also been good throughout the year, although the quantity of barrels used has been comparatively light. High grade lime, however, will slack if not put in tight packages, and the use of the barrel for lime is increasing in Canada.

The cement trade in Canada only uses a limited number of barrels, but now that the Northwest is opening up, and cement will have to be shipped there, by lake and rail, it is expected that barrels will be used extensively for this purpose.

The apple trade of 1906 was only about 75 per cent. of last year, and consequently not as many barrels were used for apples as in either 1905 or 1906 The barrel, how-

ONE OF THE PLANTS OF THE SUTHERLAND-INNES COMPANY—LOCATED AT ST. THOMAS, ONT.
Annual Capacity : 6,000,000 to 8,000,000 Staves, 3,000,000 to 5,000,000 Hoops, 2,000,000 to 3,000,000 Hoops, according to the Season.

ever, seems to be the only package which will land fruit in Europe in a satisfactory manner. The box is used to some extent for early apples, but unless handled very carefully, the fruit does not arrive in good condition. We went to the trouble to get reports from a number of the largest commission houses in England, as to which was the best package for the apple, and the unanimous decision was that the barrel was the only reliable package for carrying apples and delivering them in good condition at destination. Mr. McNeil, the Chief of the Fruit Department, at Ottawa, has been indefatigable in impressing upon the packers the advisability of using nothing but a good strong barrel. Formerly, it used to be a general saying that anything was good enough for apples, but since Mr. McNeil has been in charge, this has been changed to a great extent, and will eventually be changed entirely, and nothing but good barrels will be used for apples—well made, properly fired, and nothing but good, thoroughly dry material used.

Barrels are used for other purposes too numerous to mention, and there is no doubt that the barrel is still the easiest handled package that has been invented, and as the trade in Canada increases, the consumption of barrels will also increase.

The trade on the whole throughout the year has not been as good as the average. Prospects for 1907 are very good, and large contracts have been already placed.

I have not referred at all to the tight cooperage stock industry, that is to say, the oil, wine, liquor, and other tight barrels, as white oak in Canada is almost a thing of the past, and nearly all of the material for these barrels is brought in from the United States.

I have not given any statistics in this article as to the consumption or production, as I found the statistics which were formerly collected in this industry have been usually unreliable—first on the manufacturers' side, on account of there being so many small manufacturers springing up and going out of business all the time, and on the consumers' part, because so many barrels are used a second time. It has, therefore, been impossible to gather reliable statistics. The production this year in Canada, we would say approximately, would run in the neighborhood of 150,000,000 staves, with hoops and heading to match, and the consumption would exceed this considerably, as the stocks on hand are less at the present time than they were last year. From careful enquiry, I should judge that there is not over 75 per cent. of the stock on hand at the present time that there was this time last year.

The Proper Manufacture and Care of Pine and Hardwood Lumber

By JOHN McGREGOR.

JOHN MCGREGOR.

SOME ten or fifteen years ago the manufacturing end of the lumber business entered upon a new era, and the band saw displaced to a large extent the circular, and even to some extent the gang saw. It has stood the test remarkably well and commends itself to the manufacturer mainly on account of its economy of raw material. With pine at its present high figure, and getting scarcer and dearer every year, this is a very important, perhaps the most important, consideration.

If by the use of the band saw one hundred and twenty feet of lumber can be produced for every one hundred feet produced by the circular, the difference constitutes in itself a considerable profit to the manufacturer. He can, therefore, well afford to take extra pains to see that his lumber is well manufactured and well taken care of. Nearly all operators agree that it is quite possible to make as good lumber with the band saw as with the circular, but they don't always do it, and the band saw, therefore, shoulders the responsibility for a good deal of badly sawn lumber, one of the most noticeable defects being unevenness in thickness.

When the band saw was first introduced, and before filers and sawyers understood how to manage it properly, many mill men were disgusted with its performance, and were inclined to discard it on this very account, it being not uncommon to find a variation of half an inch or more in the thickness of a board, and, while this is not the case now to such an extent, there is still much room for improvement. A good deal of badly sawn lumber is, no doubt, due to overcrowding the saw.

When, by the introduction of the double band saw, operators found they could increase their daily output some 25 or 30 per cent., they were in many cases not satisfied with this, but tried to stretch it to 40 or 50 per cent., which, with the average run of logs, is more than can reasonably be expected.

Too much care cannot be taken to have all lumber cut plump enough and wide enough to allow for shrinkage in seasoning, and of a uniform thickness from end to end. When a board or plank is thin in any part of its length, it generally unfits it for the purpose for which it was intended and must be graded down to the next standard thickness. When consumers have to pay the high prices that now prevail, they naturally object to suffering any loss from this cause. Pine lumber is the raw material for a great many industries, and those engaged in them find it hard to obtain prices for their finished product commensurate with the rapid and phenomenal advance in the price of lumber, so that many small defects of manufacture, which were overlooked by them in the past, are now subject to closer scrutiny.

Some of the mill men engaged in the manufacture of hardwood lumber exclusively are very careless in regard to the quality of their work, and it is more often the exception than the rule to find hardwood lumber sustaining its full thickness after a few months' seasoning. This entails a loss upon themselves, as hardwoods are generally sold subject to inspection by the buyer at the point of shipment.

As in the case of pine, therefore, all lumber should be sawn plump in thickness and width to allow for seasoning, and should be closely edged and butted or trimmed at the ends. Nothing so detracts from the appearance of lumber as jagged or uneven ends, and bark or wane showing on the edges. It is better to cut off all bark or waney edges in the first place, as all lumber is measured inside the bark or wane anyway, and it adds much to the appearance and consequently the value in the eyes of the buyer.

In sawing a hardwood log it should be manipulatd in such a way as to get the best part of the log, avoiding the heart, which is of little value and which should be cut into such dimensions as are suitable for rough work.

When it is desired to cut the log into squares, only such logs should be selected as are large enough to allow for cutting at least four pieces from each, the heart just barely showing on one corner of each piece.

Squares that are cut from small logs and which contain the heart in the centre will usually check so badly in seasoning as to be worthless for most purposes. Our hardwoods are fast disappearing; oak, maple, cherry, walnut, chestnut, basswood and many others that were so plentiful in North-western Canada a few years ago are now almost a thing of the past. A good deal has been said and written about the disappearance of our pine, and something has been, and is being, done in the way of reforestration of our pine lands, but our hardwoods when gone are gone forever, leaving behind nothing but a wilderness of stumps and regretful memories of the past.

GRADING.

There is much lack of uniformity in grading among the mill men, more especially in pine lumber, some manufacturers, in fact, doing very little grading on the trimmers, preferring to put up the bulk of their stock log run with mill culls out. Much, of course, depends upon where and how his lumber is to be marketed. If it is his custom to sell to the middleman, or wholesaler, his entire season's cut at a price all round, the matter of grading is not of so much importance, and more especially if he sells to the same buyer year after year, as is the custom of some mill men. The dealer in that case gets to know pretty well how the stock will run and can estimate pretty closely the price he can afford to pay and leave himself a margin of profit. This style of doing business obtained to a much greater extent some years ago than it does to-day, many of the manufacturers preferring to do a car trade, selling direct to the retailer or the consumer and thus securing the wholesale profits for themselves. In that case, grading at the mill becomes of prime necessity, and the larger the number of grades the more readily will purchasers be found and the higher the price realized.

When a customer wishes to purchase a car of lumber, as a general rule he wants it of one particular quality. He knows just what he wants and is willing to pay the price for that particular grade, but if he has to accept a mixed lot containing perhaps a proportion of a better class than he requires for his purpose, he is unwilling to pay the higher price demanded; while if a part of it is coarser than is suitable for his purpose, he is dissatisfied and will probably next time look elsewhere when he wishes to purchase another car of lumber.

The want of uniformity in grading above referred to, and the lack of uniform rules of inspection in Canada, make this part of the subject somewhat difficult to deal with. I will, however, indicate some of the grades that our North Ontario mill men who do a car or cargo trade usually have on their lists, namely:

For 1, 1¼, 1½ and 2-inch sidings, the grades are, beginning at the lowest: mill culls; box (or shipping) culls; common; dressing, or flooring; No. 2 and 3 cuts, and No. 1 cuts and better.

For 1 x 8, 1 x 10 and 1 x 12 stock boards, the usual grades are: mill cull; box; common, and dressing and better. 4, 5 and 6-inch strips may be graded or not as it is most convenient.

There are other grades or sub-grades, but the above will be found convenient and will facilitate trade between buyer and seller.

Hardwoods are generally put up log run with the mill culls out, and the grading is usually done in shipping. First and seconds (together); No. 1 common, and No. 2 common are the usual grades.

The Lumber Section of the Board of Trade of the City of Toronto, on June 16th, 1890, adopted a set of rules governing the inspection of pine and hardwood lumber; those that refer to hardwood do not differ materially from those in use by the trade in the United States, the main difference being that they are not so closely lived up to.

PILING.

Many of our mill men do not seem to attach the importance to this branch of the trade which it merits. They continue piling their lumber in the same way and mostly in the same contracted space year after year, regardless of the fact that their product is of double the value it used to be some ten or fifteen year ago, and therefore should be doubly well taken care of.

Land, as a general rule, is not very scarce or high priced in the immediate vicinity of the saw mills, yet the piles are very often crowded together as if the main consideration is to save space. A fact that should commend itself to the manufacturer very forcibly is that the more openly lumber is piled the sooner it will be in condition for shipping, so that he can turn it into cash and reduce his interest and insurance account.

This is a very important matter when one considers the length of time the lumberman's capital is tied up before he can begin to realize on his product. He sends his men and teams into the woods in the fall of the year; logging operations are carried on all winter, then there is the river driving in the spring, and the lumberman is lucky if he gets his logs to the mill before July, and frequently part or all of them are hung up until the following year. After they are manufactured into lumber the bulk of it is not in condition to ship until the next year, so that his capital is tied up from two to three years. Taking all this into consideration, open piling should commend itself to him as of the highest importance.

Much loss is sustained yearly through bad or careless piling, both in pine and hardwoods. In the case of pine much of it is badly stained through piling too closely. During the hot summer months the higher grades, which usually contain a large proportion of sappy lumber, often suffer severely from this cause. A piece of clear white pine having bright sap on one side will, after it is badly stained, be reduced one half in value. Every pile should be at least three feet from the ground, and there should be not less than three feet of space btween it and the next pile (the more the better). The space between each board should vary according to the width of the lumber, the wider the boards the greater the space; for lumber averaging ten inches in width the space between each should be at least four inches. The crossers should be selected from the narrowest pieces, and care should be taken to see that each is exactly over the one in the course beneath, otherwise some of the lumber will sag in the pile and become crooked. Wherever practicable, each length should have a separate pile, but if inconvenient to do so then ten to twelve feet lengths might be piled together, thirteen and fourteen together, and fifteen and sixteen feet lengths together. Where these lengths are all piled in one pile the ends of the longer lengths straggle over the end of the pile and become crooked, stained and weather-beaten.

Every pile should have a pitch of not less than six inches from front to rear, and when completed no time should be lost in roofing it with a cheap but sound grade of lumber. If allowed to stand for any length of time without being roofed, the action of the rain will very quickly have the effect of turning the sap quite black.

In the case of hardwoods, each pile should rest upon three sills, one at the front, rear and middle, with three crossers to each tier, directly over the sills. This is very important, because in piling green hardwood if the crossers are more than six or seven feet apart the lumber will sag and will season in that shape, each piece being bent like a bow—a very serious defect, detracting not only from its appearance but also from its usefulness. As in the case of pine, but of even greater importance, each length should be piled separately and both front and back ends protected from the sun by the crossers extending over them a couple of inches or so.

Some hardwoods, such as birch, warp and bend very easily, and it is almost impossible even with the best of care in piling to secure straight lumber after seasoning.

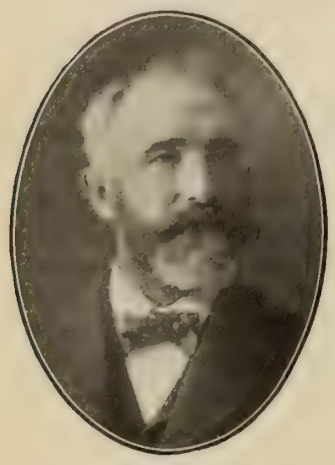
To sum up: It cannot be too strongly emphasized that a little more care (involving perhaps a trifle more expense) bestowed upon the manufacture, grading and piling of lumber by the manufacturer will bring better results all round; while a more favorable impression will be made upon the prospective customer whether he looks through the retail yard intent on purchasing a few thousand feet, or through the wholesale yard looking for a car or vessel load. First impressions are of the greatest importance and in no business more so than in the lumber trade.

"Do you think that the automobile will displace the horse?" asked the conversational young woman.

"It will," answered the nervous young man, as he gazed down the road, "if it ever hits him."

CULLS, CULLERS, CULLING

By B. F. KEAN.



B. F. KEAN.

WHEN honored with a request to contribute something to this special number of THE LUMBERMAN, I decided on the above subject as the one most familiar to me, the one to which I have devoted the most thought and study, the one which I consider the most important in the whole lumber business, the one containing the most abuses, and the one, I regret to say, which has not received the attention which it deserves.

We read a great deal about the inspection and grading of lumber and kindred subjects, but about sawlog culling and cullers no one seems to have interested themselves enough to express their views.

In lumbering, theories are no use; what we want and look for is hard, every day, matter of fact, practical experience.

A person to make a success of anything must concentrate his thoughts and energies upon that particular thing; and the one who does this is certain to attain ultimate success.

It has been a prevailing idea for years that culling sawlogs is an easy job, and that anyone can do it. Perhaps there was a shadow of truth in that idea some 40 years ago, when only the very best of the pine was taken, and the class of logs far different to what they are to-day; and the culler so long as he could tally his logs and sum them up, did about all that was required of him.

The difficulties a culler has to contend with to-day are legion, and the obstacles are all that the individual and combined versatile ingenuity of all hands, from the jobber to the trail-cutter, can put in his way. He is looked upon as a pariah by the rest, and every man's hand is against him, whether his hand is against every man or not.

A culler, to do his work intelligently, and with equity and justice to the Government, the lumberman and the jobber, requires to have *inter alia*, a fair knowledge of timber; to know something of lumber; should see logs manufactured in the mill, and note the different defects and the way they affect the lumber; take notice of the timber standing in the woods and note the quality; watch closely what percentage (if faulty) is being skidded; and at all times keep his eyes open, for he may be sure when he has to a certain extent grasped most of the main ideas, there are still a lot of things to learn, from others who know a lot more than he, and from some whom he may think do not know as much as he.

Fifteen years ago, when the "Ontario Cullers' Act" was passed and yearly examinations inaugurated, I was in hopes it would have the effect of producing a higher standard of cullers than existed previously, but I have been disappointed; the standard has not been raised, but the reverse; and the same idea prevails as of yore, "any one can pass the examination, get his license and be a culler."

The "Cullers' Act," if carried out as it should be, is a mighty good thing for both the lumberman and the culler. To the one it should be a guarantee that any one applying for the position of a culler is well qualified to fill it, while to the other it makes him independent of any coercion from the lumberman, and all he has to do is to carry out the provisions and instructions of the Act, without fear, favor or affection.

But what do we find? Ninety-nine per cent. of those presenting themselves at these yearly examinations get their licenses whether they have the necessary experience and possess the necessary qualifications or not.

There are in the Province of Ontario to-day 1,128 licensed cullers (I would like to know how many are conversant with the Cullers' Act), and I have no hesitation in saying that 30 per cent. at least of these should never have had the licenses given them.

A case or two in point. At the first examination in 1891, I was one of eight writing at a table, and there was one young man who had never done anything at scaling logs, sat and copied off another all the subjects on which we were writing. He got his license. In 1905 a young man who had never been in the lumber woods wrote at the examinations. He had previously been posted by a relative who had passed some years before. He got his license. I could enumerate any number of such cases, but these will suffice.

This kind of thing is misleading to the lumberman. I am sure of this, no such green-horn would be allowed to inspect, grade, and ship lumber. A lumber inspector has gained his knowledge by years of service and practical experience. Take any profession you like, before the candidate can present himself for examination he must possess the necessary education in that particular line. Then why make an exception in reference to sawlog cullers, whose work and position are as responsible as any in the country?

When this sort of thing is allowed, it only reduces these examinations to somewhat of a farce.

Yet these kind of cullers (?) have no difficulty in getting a position. They work cheap. They have had no practical experience, have no idea of lumber or logs; when they come to a defect they think they ought to reduce the log, but how much to be just, they have no idea. It is all a guess; the result is there is in many cases trouble about the scale of the logs either between the lumberman and jobber or with the Government.

These are the ones that bring the profession into ill-repute, suspicion and distrust and cause all the dissatisfaction in the business; and there is a lack of tone and dignity that should characterize a position of such responsibility and trust.

What both the lumberman and the government should insist on for their own interest and a safeguard to all concerned, is a more rigid examination, and demand that anyone before they can present themselves at these yearly examinations should possess as a first qualification four or five years as assistant culler, and have some idea of the qualifications previously mentioned.

Another evil in the business is cullers pretending to scale logs in an intelligent and proper manner, with an iron or wooden gauge with only the inches marked on it. These cullers may say they can, but I say they can't scale logs and do justice to all concerned, without a proper log rule, having on it the contents in feet of the different length logs.

He can no more intelligently make proper reductions on defective logs than a physician can take the correct temperature of a patient without a clinical thermometer. It looks to me a careless, indifferent and slipshod manner of doing a responsible and important piece of work.

An illustration: A year or so ago I saw two cullers, one for the buyer, the other for the seller of the logs, working with these iron gauges. They came to a defective log 16 feet long, 26 inches dia., 484 feet. The buyer wanted it at 16 feet, 23 inches, 361 feet; the seller said "No, I will give it you at 14 feet, 24 inches, 350 feet." They disputed some time over it, to my amusement, before it was finally settled. Now, had these men a proper log rule, giving the feet contents, either would have quickly taken the offer of the other.

If I were in a position of authority over any logging operations and caught a culler working with a tool of that kind, he would only stop there long enough to pack his goods and get out.

While of late years in other branches of sawlogging there has been progressiveness and every facility to expedite and make work easier, there has been no consideration or improvement for the culler. He is still up against the same old obstacles and difficulties.

In most cases logs are skidded with no regard or consideration whatever for getting at the correct lengths, often from 10 to 20 feet long piled in the skidways, and not cleaned at the ends so as to afford easy access, but brush, logs and other obstructions left or piled there, so that in many cases it is impossible to get at them; and along lakes aud streams with steep banks they are worse still, and often a menace to life to attempt to count the number of pieces, let alone get the number of feet. Then, again, a culler will have a number of camps to look after and in many cases have to walk 10 or 20 miles to reach them; and often not sent to the woods early enough in the season, and before he is caught up with the scaling there is from 10 to 15 inches of snow on the logs. And with these and other things to contend with, a culler is held responsible to make correct measurements and swear to the same. What absurdity!

Some operators will tell you that logs cannot be piled trim on the skidways and made easier of access. Well, I believe what one man does another man can do, if he wants to. I know men who do put their logs up as they should be, and they are the gainers by so doing, for the logs are easy of access and correctly scaled, easier loaded on the sleighs, and look two or three dollars better per thousand feet.

You tell me of the man engaged in any other branch of the business, with these obstacles and hindrances put in his way, or do anything like the walking a culler does, and I will show you a man packing his "turkey" in quick order and seeking a more congenial and up-to-date place to work.

Here, I contend, the Government should step in and remedy matters. They issue circulars in reference to other branches of the operations, but about this most important part, to not only themselves but all others concerned, they do not seem to care whether the culler, whom they hold responsible, has any chance or not. If they make these men pass an examination, hold them under oath and penalties and place responsibility on them, then it is up to the Government to protect the culler and insist that he be given every facility and a fair show to accomplish what is required of him.

And in order for the Government to do this, along with the supervision of their and trustworthy men, not men who never saw a pine tree until they reached New Ontario a year ago; or men who instead of going out into the woods and taking a sample scale as required, sit in the camp and get a sample scale from the culler. Men for these positions should be those whom we can look up to with confidence and respect for their knowledge, experience and integrity, and who will do their duty. These abuses only demoralize the service from one end to the other.

With these and other evils existing, it is no wonder there are so many disputes over measurements, so much criticism and comparison of different "log rules" to the disparagement of the "Doyle rule."

I contend this, that a practical experienced culler, who understands his business and possesses the qualifications mentioned, and given the chance he should have, will make as fair and equitable a scale with the Doyle rule as any other, notwithstanding the merits and demerits that are advanced for other rules, or the theories set forth by mathematicians that they have figured out the only and correct rule for giving the true contents of sawlogs.

I notice this, that most of them have had very little, if any, practical dealing with logs and conditions as they exist in the everyday life of the culler in the woods, and seem to have forgotten or overlooked one great factor (as aplicable to Ontario pine) in their figuring, viz., faulty and defective logs. If the mathematicians had to contend with every day, hard practical experience in the woods, and want their scale to hold out at the mill, they would be perfectly satisfied with the Doyle rule.

I know as well as any of them that the Doyle rule is hard on logs 26 inches and under; and it is all very well for the advocates of other rules to accuse our Ontario lumbermen of hanging on to Doyle because of the "over-run;" but when you consider the defects you don't see and cannot see, and the obstacles placed in the culler's way to conceal these defects, you need the "over-run" to keep the measurement right and hold your own at the mill.

I am well aware there are "sawlog hogs" as well as "fish and game hogs." They are the exception, not the rule, and all that most lumbermen ask for is a square deal and ten hundred feet to the thousand.

I have compared the Quebec, British Columbia, International, New Brunswick, Band and Rotary Saw and Scribner log rules; and I will say this—where the timber is of a small run and sound, as for instance, spruce, I believe Scribner is the fairest rule.

But for Ontario pine to have everything fair and equitable to the lumberman and others as well, I am thoroughly convinced after 38 years of scaling logs and inspecting lumber and watching logs cut up in the mill, that were the Doyle rule done away with and any of these other rules substituted, there would be an injustice to the other interests in the woods, they should appoint as woodrangers, practical, experienced lumberman.

Often when on a pile of lumber I see boards with the two ends sound and rotten in the centre I make up my mind I have been fooled oftener than I have any idea of when scaling in the woods, and I feel thankful to poor abused old Doyle for his "overrun" which makes my wood scale hold out at the mill.

I have endeavored in a crude way to point out some of the evils and abuses, and give somewhat of an idea of how things in this branch of the business present themselves to me, with the hope that conditions will be bettered and the evils remedied; and as I think I have made this article long enough in speaking of "Cullers and Culling," I will wish the Canada Lumberman and the lumbering interests of Canada a Prosperous and Happy New Year and leave it to them. And I don't think they will need a magnifying glass or X-rays to spot out the "Culls" and relegate them to the place where they belong; and in so doing ask them to carry out Section 15 of the "Ontario Cullers' Act."

Orillia, January 12, 1906.

BOILER EXPLOSIONS.

Explosions may be prevented by observing the following directions:

(1) Have the boiler inspected or tested to determine its safe working pressure.

(2) See that all possible care is used to prevent external and internal corrosion, and that the plates do not become reduced to a dangerous thinness without detection.

(3) The shell must not be strained by subjecting it to great changes in temperature, such as blowing it off hot, and quickly filling with cold water; red-hot plates should not be deluged with cold water, and no more cold air allowed in through the furnace door than is absolutely necessary.

(4) The safety valve must not be overloaded to make the task of firing easier, and the safety valve must also be watched to see it does not become corroded fast to its seat.

(5) Do not allow the water to get low.

(6) Cases have been known where the sudden opening or closing of a large stop valve, leading to the main steam pipe, has led to an explosion. There is considerable risk in so doing, hence it is well to see that such valves are opened slowly and cautiously.

(7) A boiler should not be used after it is worn out. Replace with a new one.

(8) When boilers are placed in buildings containing a great number of people, use a type of boiler in which the danger of disastrous explosion is reduced to a minimum.

The New Brunswick Government will hold a forestry convention at Fredericton, N.B., February 20th and 21st, 1907.

Trautwine's Pocket Book is authority for the statemenf that boards of oak or pine nailed together by from 4 to 16 tenpenny common cut nails, and then pulled apart in a direction lengthwise of the boards, and across the nails, tending to break the latter in two by a shearing action, required about 300 to 400 pounds per nail to separate them, as the average of many trials.

Protection of the Forests of Quebec

By W. C. J. HALL

The Governor-General of Canada, when declaring open the Congress of Forestry at Ottawa some months ago, uttered certain words which should have a very great weight attached to them. His Excellency related how, before coming to Canada, he had observed in certain foreign countries the absence of forests where formerly they did exist, and also noted the decadence of the nations in each case as compared with their previous positions.

All interested in forestry are of course prepared to accept such a statement, having made themselves conversant with the

HON. ADELARD TURGEON,
Minister of Lands and Forests, Province of Quebec.

subject, but there are a great many people in all provinces of the Dominion who would do well to take these words of Lord Grey's to heart, and not the least the people of the Province of Quebec. His Excellency's remarks were absolutely impartial; he had mentally noted the conditions, not with a view of making special mention of them at any particular time or place; in all probability he had no idea of holding the position he does now, but could not avoid remarking that obliteration of forests is invariably attended with most regrettable results.

But this line of argument leaves one open to the query, if this be true how is it that the British Isles are so productive, so prosperous, the soil so fertile, for certainly forests are sadly lacking there. This, however, can be at once accounted for by the fact of

THE FOREST ASSERTING ITSELF ON AN ABANDONED CLEARING.

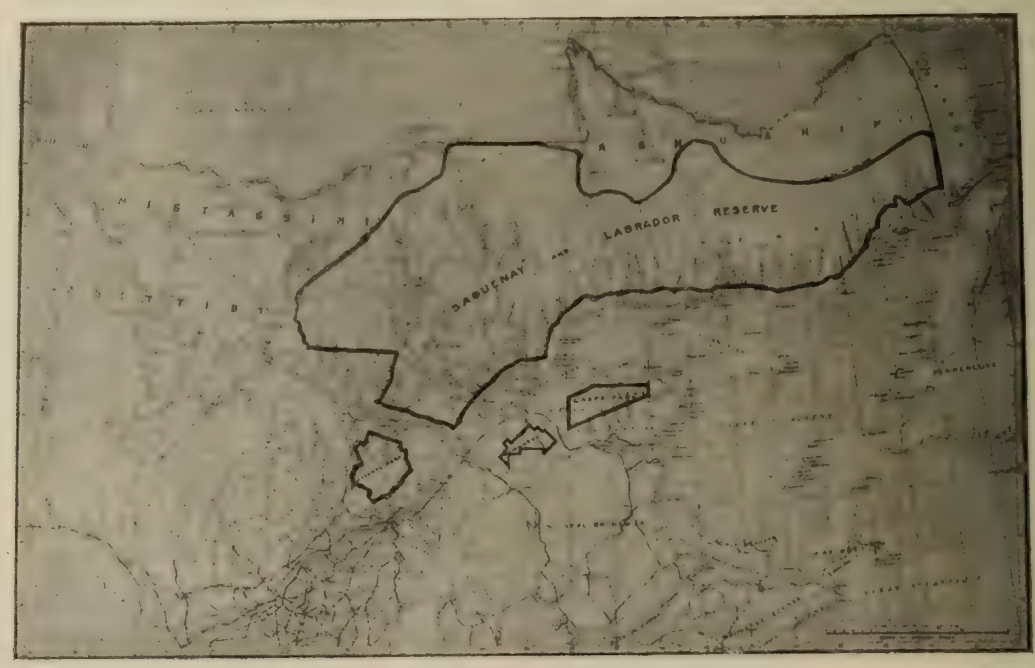
the immense precipitation of moisture from the all-surrounding seas. Establish similar conditions inland and then we get different results, no matter how extensive a country is; e.g., the mighty river Volga is to-day navigable for a much shorter distance than it was formerly when its "timberland" was covered with timber.

I hold the opinion, that as Quebec Province is essentially a spruce producing country, and the nearest to the great pulp mills of the United States, which latter have not within their own borders sufficient raw material to run the mills for any considerable period, we should take care to regulate our affairs in such a manner as will enable us to continue supplying a quota of raw material to our southern neighbors, a full supply to our own pulp mills, and withal permit no obliteration of the forests. Our capacity for supply is very great—we have, at a very conservative figure, 175,000 square miles of timbered territory, allowance made for burnings, water, etc., but it is useless to regard forests as inexhaustible. The contrary is the case. Some people imagine that the Forester's only object is to foster the lumber trade, but let us hope that such an impression is confined to a few minds only. The lumberman's object, of course, is to exploit the forest for profit, but the Forester's ideas are wider; he says, encourage the lumberman, but keep him within bounds, do not let him exterminate; remember the farmer, and maintain a generous nucleus of forest in order that artificial irrigation be not necessary in any locality—our rivers and streams must be kept pure for the use of the inhabitants, etc.

I would, therefore, say to the people of my native province, remember the disinterested and candid advice of our Chief Magistrate and see to it that the annual crop of forest products is kept within our reproducing capacity, and whilst encouraging agriculture to the utmost in areas deserving of it, limit it also to these.

OBJECT LESSONS IN FORESTRY.

The Province of Quebec, being the first settled, may reasonably be expected to show various object lessons as regards forests. We have, south and east of Montreal, a district practically denuded of forests. From this section, one hundred years or so ago, the British Admiralty procured the choicest yellow pine masts for the Navy; to-day the small streams have no existence, the minimum volume of water in the existing ones is not sufficient to warrant capital being invested in water power; auxiliary steam plants are in many cases being installed to help the present mills out in mid-summer.



MAP SHOWING THE FOREST RESERVES OF THE PROVINCE OF QUEBEC EXCEPTING THE CHAUDIERE RESERVE.

We then come to localities where the fine arable land, as far as it extends, is under

tillage, but with the country behind it timbered: the farmer is well-to-do, his land yields good crops, the wells do not run dry, the lumberman takes out his annual crop of logs, buys the farmer's produce, employs him and his horses during the winter. This is the ideal situation, but unless the lumberman operates according to the Forester's ideas the scene will be changed for the worse in a few years' time.

Next we have the virgin forest, untouched

A Burning Forest in the Back-ground.

by the axe, the large growth reaching maturity and going to decay, but nevertheless contributing to the forest floor and holding the water so necessary on the lower reaches later on in the season.

We have in Quebec all phases of the forestry problem; suffice it to cite the above cases without detailing intermediate ones.

A great responsibility rests upon the shoulders of the Local Government in administering our forests; what will our descendants say if they find that mismanagement has been rampant and the country left a barren waste? Surely we have plenty of examples before us; learned men have delivered speeches, pamphlets have been distributed broadcast throughout the land, in fact, none can plead ignorance, therefore the responsibility is all the greater. If we do not heed the oft-repeated warnings and provide for posterity, we well deserve all that may be said of us.

The Canadian Forestry Association is doing more good than a great many people give it credit for, and, speaking for the Province of Quebec, I may say that a great awakening has taken place. Lumbermen as a body are taking far more interest in the subject than formerly, and others besides.

QUEBEC'S FOREST RESERVES.

The present Minister of Lands and Forests, the Hon. Adilard Turgeon, C.M.G., from the moment he took charge of that department, was seized with the importance of this subject, and he is to-day as keenly interested in the future welfare of Quebec as at the outset. He has indeed taken the matter up seriously, and those who read these lines will, to say the least, be most agreeably surprised to find that from an insignificant position as regards the extent of her Forest Reserves, Quebec now ranks with the foremost in this respect.

To begin with, Hon. Mr. Turgeon created, by Act of Parliament, the Gaspe Park, an area of 2,500 square miles, which will forever be a guarantee to the inhabitants of that peninsula of water supply for the agricultural areas. Not long afterwards he created the Rimouski Forest Reserve, thus affording protection to the comparatively narrow watershed between the St. Lawrence and the New Brunswick boundary line. This reserve comprises some 1,250 square miles.

Then an area of unsurveyed territory, some 630 square miles in extent, was added to the Laurentides National Park.

The Eastern Townships then attracted his attention, and although this section of the province is all laid out in townships, nevertheless, as far as was possible, the lands lying at the heads of the streams were created into a Forest Reserve. This reserve is practically all in the Chaudiere River Valley, and takes in approximately 320 square miles. This part of the province is more in need of forest reserves than any other, and at the same time opposition is met with to a greater degree than elsewhere.

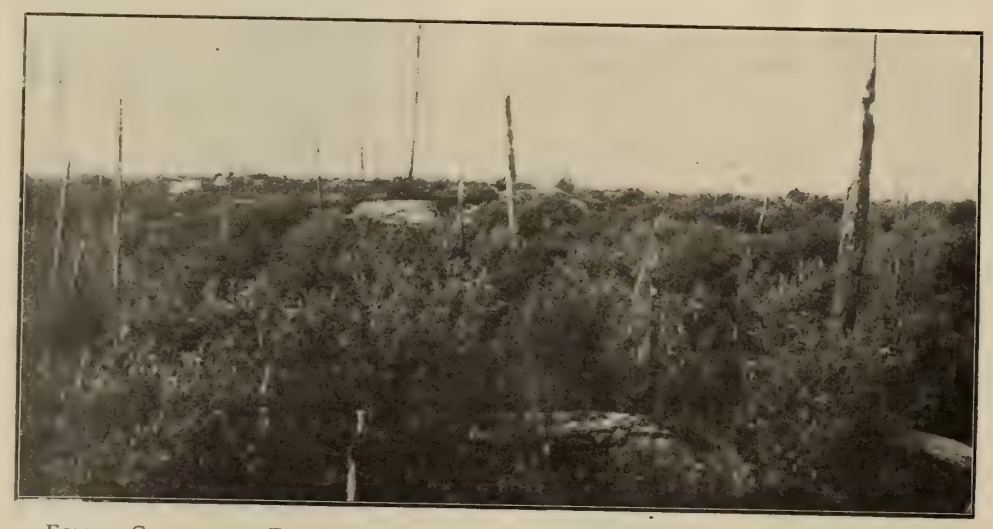
The Hon. gentleman was not content with the foregoing, however, but followed up his previous actions by creating the great Labrador and Saguenay Reserve, extending from Lake St. John to the extreme east of our territory in Labrador, this stupendous area comprising no less than 109,360 square miles.

Thus we have in Quebec to-day 116,700 square miles, or 74,688,000 acres, of Forest Reserve.

Posterity will not be able to accuse Hon. Mr. Turgeon of want of foresight or neglect of future interests; when he took office the only forest reserve which existed was the Laurentides National Park, then 2,640 square miles in area. If these genuinely patriotic measures of the honorable gentleman are appreciated as they should be and our forest reserves are maintained and administered with a reasonable degree of caution, the inhabitants of Quebec might well designate him as the Protector of the Province.

THE FIRE PROTECTION SYSTEM.

Hon. Mr. Turgeon has, without intending to imitate any system of forest protection now existing, acted substantially on the axiom I saw lately quoted in a certain Blue Book, viz.: That the best way to put out forest fires is to "not let them occur." Our system of fire ranging is as follows: The lumbermen choose the men they think are most competent, and pay them; the Government makes the appointments and charges no tax; a reasonable number of men must be put on or the Government intervenes and does so at the lumbermen's expense. Inspectors are employed by the Government who keep up a continuous patrol during the whole season. The cost of extinguishing fires is borne half by the operator and half by the Government. Where fires occur along lines of railway, the expense of extinguishment is divided into three, viz., the operator, the railway and the Government. The trial of this system during the current year, demonstrated the fact that all lumbermen do not regard the subject with the interest they should, but the great majority do, which is very gratifying. Each succeeding year should show an improvement in this respect.



Forest Completely Destroyed by Fire; Incipient Forest Beginning on the Soil Which was not Consumed.

I think that 1906 was as dry a season as ever occurred in our province, and I am pleased to be able to say that although we

had numerous fires, still most of them occurred in localities where fire had run before. The greatest sufferers were the settlers, and they have only themselves to blame, as fire-posters were distributed with the greatest possible profusion everywhere.

I wish to make special mention of the assistance given to the Government by the Roman Catholic Church in our province. With Hon. Mr. Turgeon's consent, I interviewed one of our Quebec Directors of the C.F.A., viz., Monseignor Laflamme, and with his valuable assistance drew up an open letter to be read in every church in the province. This was submitted to His Grace, the Archbishop of Quebec, and he most kindly gave permission to the various church dignitaries to read from the pulpit the letter, which in substance exhorts everyone to lend a hand in the protection of the forests. The good effect of this action would be difficult to calculate. As regards our great northern forests, measures were taken for protection which had never before been thought of. We first of all secured the co-operation of the Hudson Bay Company and then, through the kindness of Rev. Father Lemoine, of Maniwaki, got up fire-posters in the Indian dialects; the Hudson Bay Company transported the various packages free and the missionaries distributed them, as well as the company, and specially appealed to the Indians to be careful. Thus at all the Company's posts in the province the gospel of protection was practicaly preached and in this manenr reached the ears of a great number of people who never before, perhaps, had heard any argument in favor of forest protection.

Cases of infractions of the law occurred, as may always be expected in the settlements for the first time. These matters were taken up seriously by the Government and fines imposed; the effect of such action in my opinion will be most salutary.

Hon. Mr. Turgeon has, in my position of Superintendent of the Forest Protection Service, given me all the backing that a man could wish for, and, although the service is by no means perfection yet, still a marked improvement has taken place generally. Where 250 men were formerly employed we had this year 375. Next year the list will be more extensive.

CO-OPERATION OF THE RAILWAYS.

The railway companies, I believe, exercised more care than ever before along their respective routes, and here I must make special mention of the Quebec & Lake St. John Railway. The general manager, Mr. Jas. G. Scott, left nothing undone to safeguard the timbered areas along the line; the right of way was burnt and cleared of dry grass, before the snow had gone in the adjoining forests; employees received the strictest possible kind of instructions, the section-men followed the trains, and barrels of water were placed on bridges and culverts and kept filled with water. In addition to this, the twenty-two engines on the line were equipped with a device of my own for arresting sparks issuing from the stacks. This apparatus aided materialy in preventing fires. As it is my own invention, I leave others to judge of its merits, but invite thorough tests of it by the railways.

The system of fire-ranging in our Province as it is at present may, doubtless, be improved upon, but a serious effort has been made to better past records. We believe we have succeeded and will continue the good work in the future.

In thus advancing the cause of forestry in Quebec, Hon. Mr. Turgeon was fully aware of the fact that, apart from safeguarding the forests in the direct interests of the lumber trade and agriculture, he was, and is protecting another most valuable asset, viz.: fish and game. Pray, what can any country do in this line without forests; instead of being a recurring commission as it now is, the value would shrink to utter insignificance and there would be no revenue from it.

A Plea for Posterity; Growth of Spruce

By E. G. JOLY DE LOTBINIERE.

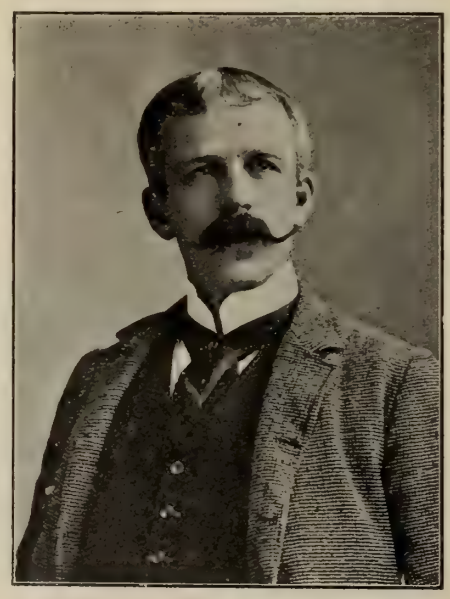
Until sixteen years ago, that is, before the pulp and paper industry and the export of pulpwood had taken such gigantic strides, conservative lumbering was unconsciously followed by Canadian lumbermen.

The existence of our forests up to that date was only threatened by two grave dangers—"fire" and "the bogus settler"—but a third and formidable foe has since arisen in the person of the "unscrupulous pulpwood maker."

On broad lines, the national forestry problem in Canada resolves itself into combatting these three great dangers. If fire and the bogus settler were kept out of our timbered areas and a stop put to the felling of our immature timber for pulpwood, Canada could, and with justice, boast of her inexhaustible forest resources, for their perpetuity would then be assured forever.

As I intend dealing to-day with the danger threatening our forests through the pulpwood industry, I would like before going any further to quote some of the remarks made by Mr. E. B. Biggar, Editor of the Pulp and Paper Magazine, in a valuable paper read by him at the Canadian Forestry Convention in 1906. A few words on the rise and expansion of this great industry, which, as at present conducted, imperils the existence of our magnificent spruce forests, should be of sufficient interest to the public to warrant the reproduction of a portion of Mr. Biggar's paper, in which he says:

"Three years ago Canada entered on the second century of its career as a pulp and paper manufacturing country. For the pioneer mill as well as for the development of recent mills operating under the most modern conditions, this country is indebted to enterprising citizens of the United States. The industry had its birth in 1803 at St. Andrew's in the Province of Quebec, a company of men from the



United States, with James Brown at their head, having obtained a thirty years' lease from the seigneur of the district. In this same year the Fourdrinier machine which was to revolutionize paper making was introduced into England. The St. Andrew's mill, which was a small one, found its market in Montreal and Quebec, and was operated until 1834, when a freshet carried away the dam, and the seigneur objected to its reconstruction.

"A newspaper proprietor, A. H. Holland, of the Halifax Recorder, built the second mill near Bedford Basin, N.S., about 1819, and the first mill in Upper Canada came into existence in the following year at Ancaster. The last named mill soon disappeared, but public attention was now directed to the subject, and as the result of a bonus offered in 1826 by the Government of Upper Canada to the first paper mill that should be started, two contestants ran a race in building. The contest was so close that the winner was only able to secure his prize by starting his mill on a Sunday. By 1842 Upper Canada had fourteen small paper mills. The census of 1851 showed that Upper and Lower Canada had five mills each, the returns of 1861 adding one mill to Lower Canada. The census of 1871 gave 12 mills to Ontario and 7 to Quebec, and one each to New Brunswick and Nova Scotia, these 21 mills employing 760 hands. The census of 1881 recorded 36 paper mills and five pulp mills, and that of 1891, 34 paper mills and 24 pulp mills.

"It was in the decade 1880-90 that the era of the pulp and paper manufacturing from wood may be said to have begun in Canada. In 1886 the writer took some samples of pulp and paper made by the Canada Paper Company to the Colonial and Indian Exhibition in London, and though the suggestion that Canada could supply pulp to British paper mills was not then regarded seriously, actual shipments began shortly afterwards in quantity, and when wood pulp first figured separately in the trade and navigation returns in 1890, the value of the shipments had reached $168,180.

"The development of pulp and paper manufacturing from 1888 to 1905 is shown by the following figures compiled from the various editions of the Canadian Textile and Paper Trades Directory:

PULP MILLS.

Year.	No. Mills.	Capacity in tons per 24 hrs.
1888	34	154
1892	37	312
1899	39	1,145
1905	56	2,470

Or at 300 days to the year 741,000 tons in 1905.

PAPER MILLS.

Year.	No. Mills.	Capacity in tons per 24 hrs.
1888	40	173
1892	38	209
1899	33	328
1905	38	854

At 330 days to the year 281,820 tons in 1905, or nearly a million tons a year of pulp and paper.

Note.—The total capacity of mills producing chemical pulp by the sulphite process was about 500 tons per day in 1899, and the same in 1905, so that the increase of the last six years has been wholly in mechanical or ground wood pulp.

"It will therefore be seen that the capacity of the Canadian pulp mills has more than doubled and the capacity of the paper mills increased still more in the last six years. Besides the mills in actual existence at the close of 1905 there are now in course of erection six pulp mills with a total daily capacity of about 630 tons, and eight paper mills with a total daily capacity of 375 tons. These do not include the names of the companies who have projected, but have not yet actually started mills.

"According to Canadian returns, the exports of pulpwood for the year ending June 30 last were 593,624 cords, valued at $2,600,814. These returns are considered by those who should know to be much understated. The methods of measuring in some districts give from 140 to 170 cubic feet instead of 128 to the cord. On the borders of Maine and New Brunswick and other regions where streams cross and recross the boundary quantities go out without record as exports, while around the upper lakes quantities are taken from unfrequented streams, and towed across the lakes without record. Some shipped as cordwood is said to find its way ultimately to the pulp mill after arriving in the United States. For these and other reasons it is probable that the actual present export of pulpwood to the United States amounts to 750,000 cords annually—some place it at nearly a million. The shipments over the Quebec Central Railway alone last year to the States were 235,476 tons, or at 72 cubic feet to the ton, 132,455 cords; over the Intercolonial, 173,245 tons, or 97,550 cords; over the Great Northern, 10,148 cords; over the Quebec and Lake St. John, 18,000 cords. The figures for the two principal railway systems, the Canadian Pacific Railway and the Grand Trunk Railway, are not available, and there are the shipments by barge and tow up the St. Lawrence, and across the Upper Lakes to be dealt with.

"But taking the official returns as correct, we find that the exports of pulpwood to the United States have increased from $80,000 in 1890 to $637,865 in 1896, and to $2,600,814 in 1905, or more than fourfold in the past ten years."

Relying on the accuracy of Mr. Biggar's figures, we face the fact that between 750,000 to 1,000,000 cords of Canadian pulpwood were exported to the States in 1905, and that 575,000 were consumed by the Canadian pulp and paper mills.

Prior to 1890 there was practically no market for the product of 5, 6, 7 and 8-inch logs, and consequently timber of small dimensions was not felled to any extent. Spruce, in the Province of Quebec, at that date, could not be felled under 11 inches diameter on the stump. Unhappily, a few years afterwards the Government was induced to commit, in my opinion, the grave error of allowing black spruce to be felled at a diameter of 7 inches on the stump. This concession at once opened the door to grave abuses, and it is a well known fact that in the case of unscrupulous operators, white spruce shares the same fate as black, and is felled far below the Government restriction of 11 inches on the stump. Up to 1894 pulpwood was not shipped under 6 inches in diameter, now 4-inch wood is readily accepted. It is easy to distinguish white from black spruce before it is felled. The two varieties do not as a rule grow to any considerable extent together, black spruce growing in low-lying grounds and in the vicinity of swamps and lakes with flat shores, whilst white spruce, as a rule, seeks higher and drier soil. The bark of the two varieties is also different, the black spruce being a much darker colour than that of the white, and also smoother.

When converted into logs or cut up and corded ready for shipment, it is practically impossible by looking at the sawn faces of the timber to distinguish one variety from the other, and when barked it is impossible. There is but one period at which supervision can be of real practical use, and that is when the timber is being made.

An erroneous idea exists that our spruce forests have such a marvellous recuperative power that land denuded of all merchantible timber will in 15 to 18 years, offer a new and paying crop to the owner. This may be true where all timber less than 11 inches on the stump was left untouched but where close felling, say to 7-inch diameter on the stump, has been followed, it is absolutely false.

I have measured 100 white spruce in order to find the number of years required to grow one inch in diameter, with the following results:

1	tree	grew 1	inch in	4	years.
1	tree	grew 1	inch in	5	years.
8	trees	grew 1	inch in	6	years.
12	trees	grew 1	inch in	7	years.
24	trees	grew 1	inch in	8	years.
23	trees	grew 1	inch in	9	years.
18	trees	grew 1	inch in	10	years.
8	trees	grew 1	inch in	11	years.
4	trees	grew 1	inch in	12	years.
1	tree	grew 1	inch in	13	years.

These hundred trees took on an average eight years to grow one inch in diameter. This I consider about the normal growth of our white spruce under favourable conditions. Where conditions are unfavourable the growth is considerably slower.

A stand of white spruce, from which all trees of 7 inches and up on the stump have been removed, would take between 40 and 50 years' rest before it would be in a position to offer a fair cut of 11-inch trees. Black spruce takes about double the time of white to grow one inch in diameter, and consequently a stand of black spruce that has been closely cut would not be fit to offer a paying crop for a long period of years.

I am far from being hostile to the pulp and paper industry. It is one of the most important in the Dominion, and as such should be jealously fostered and safeguarded in every way. To ensure its expansion, and secure for all time a certain, cheap and abundant supply of the raw material necessary to carry it on, the felling of small timber, the hope of the future, the source of supply in years to come, should be carefully guarded against and all infractions of the regulations relating to felling severely visited on the offenders.

The advantages of prohibiting the export of our raw material and manufacturing it in the country are known and acknowledged by all, with the exception of the pulpwood maker. By "pulpwood maker" I mean the man who cuts his limits not to furnish wood to his own mill, but to sell it wherever he can find a market—in Canada if possible, otherwise in the States. Ontario and British Columbia have prevented the export of unmanufactured timber cut on their Crown lands. Their wisdom has been justified by the largely increased value given their forest lands and the development on a hitherto unknown scale of all lumber industries.

Before long I trust the Province of Quebec will follow the lead given by Ontario and British Columbia. The revenue derived from its forest lands will no doubt suffer at first, but such falling off would only be temporary. The influx of foreign capital, the development and utilization of the province's magnificent water powers, the vast sums spent in wages to our own population—these and many other benefits would in a short time more than compensate for the temporary falling off in the Provincial revenue.

As operations are now carried on, our limits are being denuded in an alarming manner, and the country is already beginning to feel, and feel severely, the baneful results of deforestation in the terrible droughts from which we have suffered in the past few years, and which in all probability we will continue to suffer from more and more acutely as time goes on.

On the south shore of the St. Lawrence, rivers which furnished excellent water powers a few years ago have decreased in volume to such an extent that water power is being superseded everywhere by steam. Streams that at one time were never known to fail in their flow have become dry water courses during the summer months. The farmer is at his wits' end to find water for his cattle, and even drinking water in some cases has to be procured from long distances.

The rivers on the north side of the St. Lawrence which take their origin in the lakes and mountains still offer unlimited hydraulic power but their fate will eventually be the same as those on the south, unless the forests through which they flow are jealously preserved.

The Government of the Province of Quebec has taken up the question of forest preservation in a serious and businesslike way. Within the last few years 3,692,800 acres of forest land have been converted into "National Parks" and 71,307,200 acres into "Forest Reserve."

This land will, of course, be lumbered, but the settler will be rigorously excluded from it. An efficient fire protective service has also been inaugurated with most beneficial results, and the greatest credit should be given to the Honourable Adelard Turgeon, the Minister of Lands, Mines and Fisheries, for the valuable reforms he has introduced in the management of the Provincial forest areas. A great deal has been done, but one more important reform is urgently needed, and that is a closer "surveillance" of lumbering operations. With the right to fell black spruce at 7 inches on the stump and the inducement such a concession offers unscrupulous operators to fell white spruce at the same diameter, the operations of pulpwood makers should be carefully followed whilst felling is going on. All infractions of the regulations should be severely punished and no mercy shown offenders.

If the felling of spruce at 7 inches on the stump could be restricted to the "black spruce," bogus settlement, with all its attendant evils suppressed, and the ravages of fire controlled, the perpetuity of our forests would be secured for all time.

CAUSES OF BOILER EXPLOSIONS.

A boiler explosion can be caused only by over-pressure of steam. Either the boiler is not strong enough to carry its ordinary working pressure, or else for some reason the pressure has been allowed to rise above the usual point. In the first case, the boiler may be too weak for the working pressure because: (1) It is poorly designed; (2) the material or the workmanship may be poor: (3) the boiler may have been weakened by corrosion; (4) the boiler may have been weakened by careless or reckless management, such as letting cold water come in contact with hot plates, or blowing the boiler off hot and then quickly filling it with cold water.

When the pressure rises above the usual point that the safety valve is supposed to be set for, the fault is probably due to the sticking or overweighting of the safety valve. Some very disastrous explosions have been caused by closing a stop valve, between the safety valve and boiler, while cleaning the latter, and then forgetting to open the stop valve. It cannot be too strongly urged that a stop valve should never be placed between the safety valve and boiler.

Low water may cause explosions in internally fired boilers, but will rarely cause externally fired boilers to explode, although low water is often assigned as the cause.

THE
Wood-Worker
and Retailer

AMONG THE WESTERN RETAILERS

By C. H. WENTZ, Saskatoon.

C. H. WENTZ.

The retail lumber business has grown extensively during the past three years in Western Canada and will continue to grow for a number of years to come. The different railroad companies are opening up new territory every year, allowing plenty of room for dealers already established to spread out, as well as sufficient room for newcomers who intend going into the business.

Some people come into this country not familiar with the constantly changing railway conditions and think where there are two or three yards in a town doing a good business there is room for another. Well, perhaps there is room for a year or so until a railroad cuts off their trade and then they are all there and it's a case of the "Survival of the fittest". With the new country being opened up there should be no difficulty in getting a good location without crowding.

Business will not always be as brisk as it has been for the past three years. Crops have been good and money easy, generally speaking, and with the heavy immigration coming into the Northwest, conditions could not be other than good. During the year just past, the greatest difficulty was to get stock. It was not a question of price. There have been three advances in the wholesale price of lumber since August 1st, and it is rumored that another advance is about to take place. The price of lumber is getting very high, most of which is due to the large export and railway trade the western mills are enjoying at the present time as well as labor conditions, which from advices are very bad. Some of the mill men state that they can sell all the lumber they can cut in large dimension for railway construction, etc., which they claim is more profitable and easier to handle than if it were cut into small dimension for the prairie trade. With a bad crop or a change in the present prosperous conditions, the lumber business will not be considered the bonanza it is called at the present time. The retailer must be prepared for the change as it is sure to come, sooner or later. If he is caught with a bad crop and a large outstanding on his books, he will suffer ; so will the wholesaler. The credit business done in this country is enormous.

The largest portion of the trade comes from the farmer who builds, in some cases relying on the crop he is growing. If it fails him he cannot pay his bills. He is sorry he built so large. We are also sorry, but that does not pay his bills—neither does it pay ours, and, another thing, money may not be as easy to get just about that time.

A recent division arrived at by the mill men at the Coast and in the Mountains, to dump odd lengths onto the retailer, will work a hardship in many ways. First, the retailer will have to build additional sheds in which to store his lumber, as it will take nearly twice as much room to accommodate the different lengths. Second, the extra time it will take sorting and figuring, both at the mill and in the retail yard, will amount to considerable. Someone must stand the loss. Why not take the loss of that small piece of lumber at the mill and save freight, several handlings, and all kinds of grief for every one who has anything to do with it ?

Lap siding and clear finish have been shipped in odd lengths for some time. This class of material can be used without a loss, but drop siding, ceiling and flooring certainly cannot be used without a loss to the retailer or the consumer. The mill that can ship even lengths will certainly get the business.

The Prince Albert Lumber Co. has a large new mill which was operated part of last season, and they are preparing for a forty million cut this season. Together with the other mills located at or near Prince Albert, this district should be well supplied with the White Spruce product. A number of the mills do not exercise enough care in loading cars. They dump all lengths in together and mix the grades in such shape that it takes considerable time to sort the different lengths and grades, and since they are shipping odd lengths, matters will be worse if they follow the old practice.

The cost of unloading cars of lumber is quite a large item compared with what was paid two or three years ago, when profits were larger, comparatively, than they are now. At that time, eight dollars was about the highest price paid. Now as high as fifteen dollars is being paid, and it certainly is worth fifteen dollars to unload a large car where grades and lengths have to be sorted out and put in their proper places in the shed or yard.

From the present outlook, lumber will be scarce the coming season. Stocks in the retail yards generally are fair, but advices from the mills would indicate that stocks in the mill yards are very small. Logs are scarce and the price high. The dealer that places his orders early will be prepared for the trade, which from present indications will be fully as good as last year.

MODERN RETAIL LUMBER SHED.

Messrs. T. Millard & Son, of Holland, Man., have recently completed one of the finest lumber sheds in Canada, the plans representing the ideas of the senior member of the firm, who has spent a life time in the retail lumber trade.

LUMBER SHED OF T. MILLARD & SON, HOLLAND, MAN.

The shed is 180 feet long by 22 feet wide, 14 ft. studding, with two decks, the lower deck being 8 feet and the upper 6 feet. The upper landing floor is 6 feet wide, and the lower floor 4 feet wide. There are four bins top and bottom, with an 18-inch space between

each bin. This leaves a space wide enough to walk in between each two bins and also permits of strapping green lumber from both sides. When not wanted for strapping, the 18-inch spaces are used for remnants of dry stock, so that there is no waste room at any time.

The cupola is 6 feet clear, leaving ample room to walk upright the whole length of the building to open and shut windows when drying lumber. The windows are ten by twenty, arranged as shown in the photograph.

The foundation of the building is composed of seven run of 6 x 8 timber set on 8 x 8 posts, with stone and cement under bottom of posts. The back and end studding is 12 x 6, while the front is 4 x 4, with 4 ft. centres. This makes all the doors 4 ft. less two in. top and bottom. At the north end of the building there is a store room 22 x 30 ft. and 8 ft. high, which they use for storing sash and doors and all kinds of fancy work. Over this

PLANING MILL—WOODSTOCK LUMBER & MANUFACTURING COMPANY.

is kept the moulding, casing and base. The upper deck is used exclusively for the better and lighter grades and is sub-divided into smaller bins 4 feet square.

Messrs. Millard & Sons state that by opening the lower run of doors and the windows in the cupola a draft is obtained which will dry lumber faster than when it is piled outside in the open, while all danger of warping and mildew is removed. The shed has a capacity to shelter over 800,000 feet of lumber and stands as testimony of the faith which T. Millard & Son have in the future of Western Canada. They have yards at Holland and Cypress River.

THE WOODSTOCK LUMBER & MANUFACTURING COMPANY.

Among the largest and most progressive business concerns of the city of Woodstock, Ont., is the Woodstock Lumber and Manufacturing Company, Limited, organized about three years ago. This company is a consolidation of Clarkson Bros. and Leishman, Maundrell & Company, of whose history brief mention may here be made.

The firm of Leishman, Maundrell & Company was organized in the year 1888, the members being Mr. Alex. Leishman, Mr. W. Thomson and the late Mr. Frank Maundrell. They operated a saw mill and a planing mill, manufacturing rough and dressed lumber. In 1892 a joint stock company was formed, Messrs. George Thomson and R. E. Butler being admitted. Branches were established in Stratford and Galt. This company continued to carry on a very successful business until the amalgamation already mentioned.

In 1872 a partnership was formed under the name of A. Bickerton & Company, the partners being Messrs. R. Bickerton, William Biggins and T. L. Clarkson. This firm established a retail lumber yard, built what was then a modern planing mill, and carried on a contracting business as well. Upon the death of Mr. Bickerton in 1890, Mr. H. I. Clarkson entered the firm, Mr. Biggins retiring two years later, when the name was changed to Clarkson Bros. For 32 years this firm carried on a large business in the city of Woodstock, approximating $75,000 per year. Upon the amalgamation of the business in 1904 they were doing a very large trade and had become recognized as one of the leading concerns in Western Ontario.

The Woodstock Lumber & Manufacturing Company, since coming into existence, has made steady progress. They conduct a wholesale lumber and shingle business in addition to their retail trade, which is quite extensive, and are now considering the advisability of launching into the manufacture of small lines of wooden-ware. They are also Canadian selling agents for George W. Stoneman & Company, Chicago, Ill., and are handling exclusively their full line of veneers throughout Canada. Their planing mill contains modern equipment, including the following: Extra heavy four sided matcher, power feed

SAW MILL—WOODSTOCK LUMBER & MANUFACTURING COMPANY.

rip saw, swing cut off saw, four sided molder, single surface planer, circular resaw, large jointer, rip saw, fine cut off saw, column lathe, small lathe, post boring machine, three drum sander, two tenoning machines, mortiser, sash sticker, cut off saws, crozer rip saw, automatic cut off saw, pony planer, two spindle shaper, panel raiser, boring machine, band saw, jig saw, and disc sander.

The machinery in the planing mill is driven by a 75 horse power Wheelock engine, steam for which is provided by two boilers, but only one being required when the saw mill is not in operation.

The saw mill contains a 60 horse power engine, driven by steam from the boilers in the planing mill. It is equipped with a 60-inch circular saw with a power nigger and gang edger. The capacity of the mill is about 12,000 feet in a ten-hour day. During this year they expect to cut about 1,000,000 feet of lumber. They have excellent facilities for unloading logs direct from the car, and also have a carriage operated by power for taking logs into the mill as they are unloaded by the farmers.

GENERAL VIEW—WOODSTOCK LUMBER & MANUFACTURING COMPANY.

OFFICE AND STORAGE SHED—WOODSTOCK LUMBER & MANUFACTURING COMPANY.

WESTERN CANADA

Western Offices of The Canada Lumberman,
615 Hastings Street, VANCOUVER, B. C.; 720-721 Union Bank Building, WINNIPEG, MAN.

The Fraser River Saw Mills

For many years visitors to the pretty little city of New Westminster, B.C., have looked up the broad expanse of the Fraser river to see, a couple of miles farther up, a towering smoke-stack and a number of large buildings, apparently the home of some big industry, but which was in reality the relics of the old Ross & McLaren saw mill plant. This plant was built some fourteen years ago and operated for only a short period, since which time it remained idle until about eighteen months ago, when some American capitalists, headed by Mr. Lester W. David, formed what is known as The Fraser River Saw Mills, Limited, taking over the deserted plant. Since the advent of Mr. David and his band of co-workers there have been important things doing at Millside, which is the name of the post office at the mill.

The total area of the site controlled by this company at Millside is about 380 acres of virtually level land, 3,450 feet of which has a deep water frontage on the Fraser river, thus enabling any vessel of any draft to be brought in on tides, and hitherto there has been no trouble whatever, though vessels of 24-foot draft have been brought in to load. When fully complete, the company will have a wharfage of about 900 feet in length for loading for export trade, and both the C.P.R. and the G.N.R. have spur lines coming into the lumber sheds, to the leading-skids and to the wharves. The loading shed platform and the wharf come even with the car doors, the railway tracks being considerably lower than the tracks upon which the loading trucks run; while the bottom of the loading-slip, for loading timbers, comes even with the top of the cars when loaded. The idea is that after leaving the saws, a piece of lumber never goes upward but always follows a downward course, until safely loaded onto the cars or ships, as desired.

FRASER RIVER SAW MILLS, LIMITED—SAW MILL FLOOR, SHOWING 54-IN. SASH GANG IN CENTRE OF MILL, WITH EDGERS ON EACH SIDE.

To obtain an accurate idea of the size and extent of this plant, which has now a capacity of 250,000 feet in ten hours, let us follow the lumber from the time it leaves the water in the form of a log until it is loaded onto the cars or ships. The logs are boomed near the company's wharf on the Fraser river and floated as desired into their mill-pond, into which the jack ladder descends. The saw mill proper is 72 feet wide by 455 feet long, and, including the filing room at the top, is three storeys high. At the lower or western end of the saw mill are two L shaped wings, this part being 72 feet in width by 250 feet in length. The ceiling of the ground floor is 18 feet high, while that of the second storey is 14 feet high. Along both sides of the upper floor the roof-trusses are supported by natural growth ship's-knees, the roof itself being of galvanized iron.

The saw mill is double throughout. On the right hand side is a Simonson log turner, steam canting gear and a pair of circular head-saws—top and bottom—and which cut cants for the double-cutting band and the gang saws: this is followed by a 10-inch by 66-inch edger, a 50-foot slab slasher, and a 50-foot automatic trimmer, all live rolls and transfers being used. The carriage comprises three sections which connect up automatically, and is driven by an 18" x 20" twin feed engine. The power setworks is operated by compressed air twin engines, and occupies much less space on the carriage than any other setworks. Logs up to 120 feet long can be cut on this side of the mill. The left hand side is equipped with one steam canting gear at the log-deck, and one steam canting gear at the transfer-deck, a steam nigger, and a 16-inch double-cutting band-saw with 9-foot wheels, this being the first 16-inch double-cutting band-saw used on the coast. In the centre of the mill is a 54-inch sash gang-saw machine. The lumber continues along live rolls and transfers from the band-saw to the gang and to the edger. The edger on the left side is 8-inch

by 60-inch. The slabs from this side of the mill pass through underneath the live rolls back of the edger to the slab slasher on the right hand side of the mill, while the lumber is carried by the live transfers to the automatic trimmers on the right hand side of the mill.

The lath mill is located at the end of the conveyor which leads from the slab slasher. This lath mill is the largest type of lath mill manufactured and is of Allis-Chalmers make.

The automatic trimmers are located at the inside end of the "L"-shaped wing on the right hand side, and the sorting table extends 375 feet from the end of this "L." All lumber for the rail trade and small dimension for export trade passes from the automatic trimmers on to the sorting table, upon which it is carried to the dry kiln trucks, vessels' berth, or to the piling yard as desired. This sorting table is the first of its kind, and is well worthy of mention. Instead of chain-carriers it is operated by cables, four endless cables being used for carrying the lumber, these being operated by one drive only, which is located inside the mill. As the lumber travels along the sorting table it is taken from it according to length and grade and deposited onto the yard trucks or onto the dry kiln trucks as desired. There is a roll-feed band re-saw, having a saw-mill attachment, which re-saws lumber taken from the sorting table and rolls it back again onto the sorting table.

On the left hand side of the mill, at the inside end of the other "L"-shaped wing, a shingle mill consisting of five machines is to be installed later on. This shingle mill will be equipped to use either bolts, or cants from the saw mill.

The saw mill is equipped with a complete system of conveyors, trimmer-saws, transfers and live rolls. It is also equipped with a large air compressor, which furnishes the power for operating the power setworks on the carriages on both sides of the mill; also the kickers for rolling logs off the jack ladder, for lifting all transfer skids, and for raising the edger rolls. The saws on the 50-foot automatic trimmers are also raised by compressed air, and are controlled by the operator. with small levers which manipulate the air valves, and over which he has almost instant control. This compressed air system includes an Ingersoll steam air compressor, a large air tank with regulating valve, thus maintaining an even air pressure at all times. This is probably the first saw mill to adopt the compressed air system, and those in charge consider it a great success, as well as a convenience.

The filing room is equipped complete with Covel automatic filing room machinery, which includes all kinds of band and circular-saw automatic grinders.

Fraser River Saw Mills, Limited—Saw Mill Floor, Showing the Double Circulars, Cant Flipper, Cant Transfer to Double Cutting Band and Transfers with Crane for Placing Cants for the Gang.

THE POWER PLANT.

On the ground floor of the saw mill, three William Hamilton Manufacturing Company engines, of 500-h.p. each, are located, each engine being set on its own stone foundation. These engines furnish the motive power for the saw mill, one engine driving the jack works and circular head-saw equipment; the second, the gang and the band saws; and the third, the edgers and the balance of the mill. The boiler room is in a separate building, which is built of stone, having brick floors and iron roof, with steel trusses supporting it. This contains at present a battery of ten 66-inch boilers, and at the time of writing two more of the same size are being installed, all the boilers being supplied by the William Hamilton Manufacturing Company. The breeching from the boilers conveys the smoke into the refuse burner. This refuse burner is located at one end of the boiler-house, and is 30 feet in diameter by 140 feet high, being a combination smoke stack and burner. It is constructed of steel, on a stone base, and is lined with fire-brick up to a height of 66 feet.

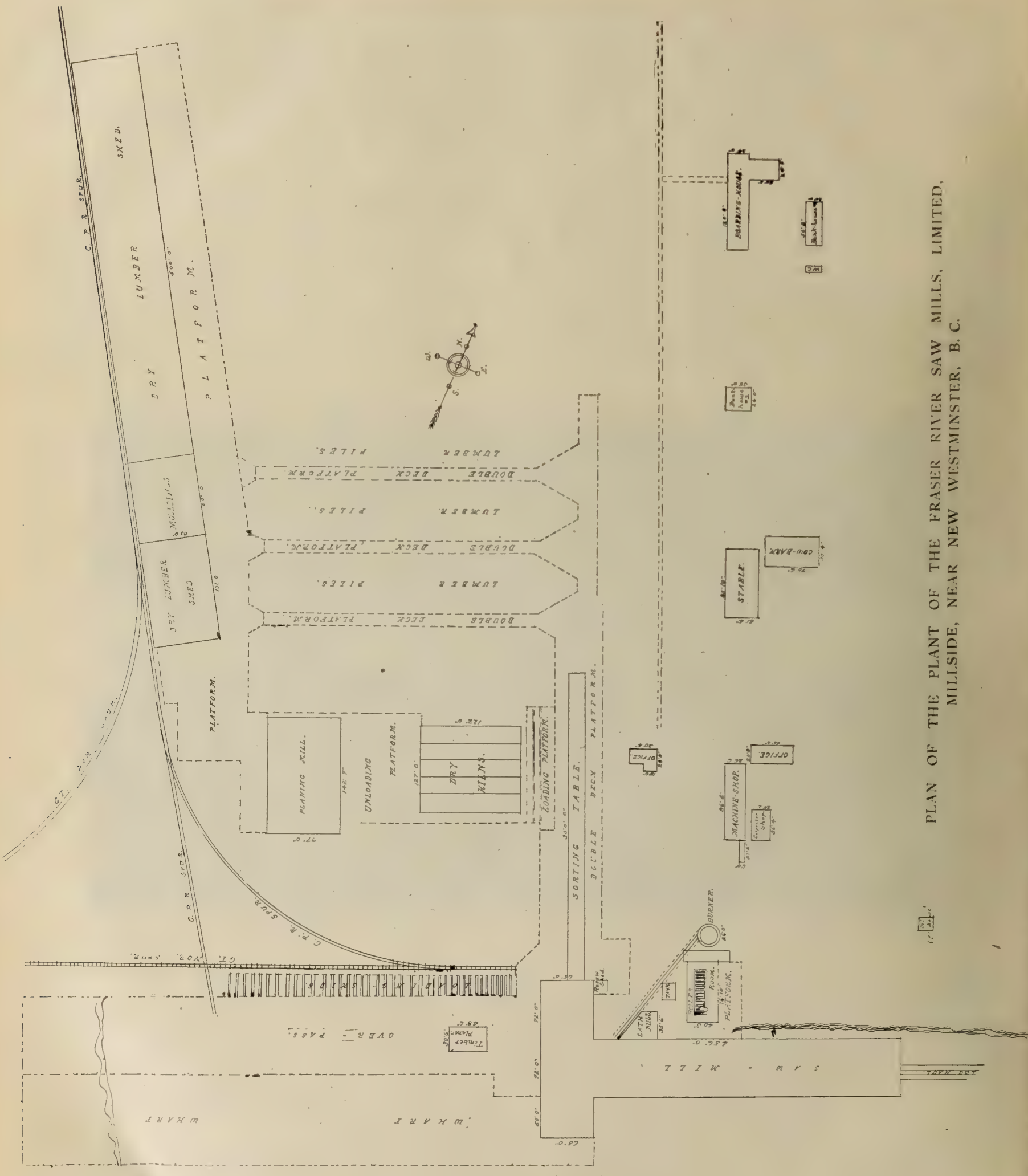
A novel feature of the plant is a steam drag-saw which has been set up on a float in the river, and is used for sawing up logs into lengths required. The steam for this is conveyed through a pipe and hose from the boiler-house. The company have three concrete dry kilns completed, and foundations in and work commenced for two more, which will make their full equipment. The dry kilns are located about 400 feet from the saw mill. Each is 20 feet wide by 120 feet long, with four tracks running through. Each kiln has its own equipment of steel roller-bearing trucks, manufactured by the Schaake Machine Works, of New Westminster, B.C.

THE PLANING MILL.

The planing mill is situated about 100 feet from the dry kilns, being a frame building 91 feet wide by 192 feet long, and is covered with a galvanized iron roof. The equipment consists of one McGregor-Gourlay four-sided planer, size 6 x 24 inches; one S. A. Wood four-sided planer, size 16 x 30 inches; three S. A. Wood new fast feed flooring machines, size 6 x 15 inches each; one S. A. Wood 6 x 12 inch inside moulder; one Mershon band rip-saw; and one Mershon 60-inch roll feed band re-saw, with saw mill attachment. Besides these there are trimmer-saws, grinders, etc., which are essential to a fully equipped planing mill.

A complete dust collecting system is installed in the planing mill and is handled by a

PLAN OF THE PLANT OF THE FRASER RIVER SAW MILLS, LIMITED,
MILLSIDE, NEAR NEW WESTMINSTER, B. C.



double, 70-inch fan, placed under the floor of the mill, which draws all the dust and shavings from the different machines and discharges through a pipe 700 feet long, into the big dust collector which is located on top of the boiler house, the shavings being used for fuel or discharged into the refuse burners.

The power for the planing mill is derived from a 20 x 42 inch Corliss engine, manufactured by John Inglis, Toronto. This is at one end of the planing mill, and in addition to driving the planers it also drives a 150 k.w., alternating current, 3,000-light dynamo, by which the entire plant is lighted.

In addition to the planers in the planing mill, there are two other planers which are located on the upper deck, 100 feet from the saw mill. One is a 16 x 30 inch four-sided S. A. Woods planer and matcher, and the other a 6 x 24 inch planer and matcher. These are, at present, driven by power from one of the mill engines. It is the intention, however, later on, to operate these two planers by electric motors. They are used chiefly for getting out stuff for the cargo trade.

Among other buildings there is a large dry lumber and moulding shed, situated about 120 feet from the planing mill and alongside of the railway spurs. This is a one-storey frame building, 65 feet wide by 132 feet long at present, and the ground is now being prepared for an extension of this shed which will eventually be 700 feet long.

They have also a very complete machine shop equipped with three lathes, one of which has a 24-foot bed, and takes a 60-inch swing; another has a 24-foot bed, and takes a 42-inch swing; while the third is a shorter lathe, used chiefly for turning pulleys; also one metal planer, 24 x 24 inch with a 6-foot table; one radial drill, sliding head, with a 26-inch swing; one bolt and nut threading machine, threading up to 1½ inches in diameter, and one power hack saw. There is also a fully equipped blacksmith shop, having a Sturtevant blower and two forges, with anvils and tools complete. The carpenter shop, besides having the regular complement of hand tools, has a band-sawmill with tilting table.

The company have their own post office, known as Millside. They have already constructed 12 or 15 new houses in addition to about half a dozen that had been previously built. These are rented to the mill employees having families, and are of a superior class. All are plastered throughout and have running water inside and electric light. The company have donated an acre of land to the school district, on which a two-room school has been erected for the children residing at Millside.

The personnel of the Fraser River Sawmills, Limited, is: President, Lester W. David, of Seattle, Wash.; First Vice-President, E. J. Dodge, San Francisco, Cal.; Second Vice-President, Henry J. Crocker, San Francisco; Secretary, Ernest Walker, New Westminster, B. C.; Treasurer, George A. Innes, San Francisco. Mr. W. P. Fowle is Resident Manager and Mr. R. E. Nevin is Master Mechanic and Superintendent, also residing at Millside.

The Fraser River Sawmills, Limited, are represented by the E. J. Dodge Company, corner of East and Howard streets, San Francisco, Cal.; Lester W. David Company, Pioneer Building, Seattle, Wash.; and the British American Lumber and Trading Company, Limited, Vancouver, B. C.

Since the mill first started to cut lumber, about one year ago, they have filled several large orders for foreign shipment, quite a number of ocean-going vessels having loaded at the wharves at Millside. The first of these was the British barque "Weathersfield," Captain Cooper, which took a cargo of lumber from this mill to Wellington, New Zealand. Among other vessels that have loaded cargoes there are the following: Sailing vessels Velore, Steinbek, Curzon and Chelmsford; Steamers Tellus, Duneric, Henley, Wyneric, Quito and Tottenham. The Tottenham carried a cargo of lumber and piling equivalent to 4,000,000 feet of lumber, this being probably the largest shipment of lumber ever loaded on one ship. It was consigned to the La Diecha & Pacific Railway Company, La Diecha, Mexico.

Fifty-Foot Automatic Trimmer, Operated by Compressed Air.

Sorting Table 375 Feet Long, Operated by Cable, Necessitating the Use of but One Drive, which is Located Inside the Mill.

Dry Lumber Loading Shed; When Complete Will Be 700 Feet Long.

Steamer "Duneric" Loading Lumber at Fraser River Saw Mills.

VIEWS OF THE FRASER RIVER SAW MILLS, MILLSIDE, B. C.

MOUNTAIN LUMBER MANUFACTURERS' IN CONVENTION.

A most successful and pleasant convention was held in the Board of Trade Rooms at Nelson, B. C., on January 16, when the Mountain Lumber Manufacturers' Association came together for their annual meeting. This Association embraces all the mill men in the Kootenay, or Interior, district of British Columbia. The meeting was the best attended in the history of the Association, practically every mill in the district being represented, and harmony and good-fellowship prevailed throughout.

The matter to come up for attention was the election of officers for the ensuing year. It was the unanimous wish that the same officers continue in their respective positions for another term, but they would not consent, as they had already served two successive terms and considered that the honor ought to be passed on. The following officers were then elected :

President, Mr. Peter Lund, of the Crows Nest Pass Lumber Company, Wardner, B. C.

Vice-President, Mr. T. Ludgate, of the Big Bend Lumber Company, Arrowhead, B. C.

Mr. Geo. P. Wells was heartily endorsed in his position as permanent Secretary-Treasurer of the Association.

The labor situation came in for a good deal of discussion. It was established that while the very highest wages are paid, it is almost impossible to secure good reliable men for work at the mills and in the logging camps. Mr. Wells was therefore instructed to carry out a careful advertising campaign in Eastern Canada and in those parts of Europe where the best and most intelligent labor could be procured. The object of this effort is to show to intelligent eastern labor the great possibilities of Interior British Columbia and to convey to them an adequate idea of the wages paid and the class of work required. Mr. Wells was instructed to use his own judgment in deciding where to advertise and how to carry out his campaign.

The sales department which is conducted in connection with the Association reported a very prosperous condition. This department is an excellent thing and worthy of mention. Ever since the demand has become so great buyers have been handicapped and delayed by having their orders returned from the mill to which they had sent them, owing to the mill being overloaded with orders. In this way a buyer might go the round of several mills before he found one able to fill the order, and in the meanwhile time was passing. The Association, therefore, through its Secretary, has undertaken to place any such orders with that mill which is in the best position to fill them, provided the buyer is willing to accept the Association's assistance. The need and feasibility of this new departure, as well as its success and popularity, was fully demonstrated by the reports at the annual meeting of the Association.

The existing prices of lumber then came in for discussion.

Speaking to the CANADA LUMBERMAN representative, Mr. Wells, the secretary, stated that prior to the holding of this annual meeting he had "made a careful investigation of the lumber situation in the interior, aud found that the aggregate stock of the mills of the entire district amounted to a mere nothing compared to the demand that is being made upon it. Practically every mill in the country is shut down during the winter months, and the new stocks next spring cannot be in shipping order till May or June next. Notwithstanding these conditions and the known fact that what may be termed a lumber famine will certainly exist, during the spring months at least, no advantage has been taken by the manufacturers by putting up the prices to what might be considered an exorbitant figure, but which could certainly be obtained. The only change made in prices was an advance of 50 cents per thousand on common lumber. Everything else remains as it was, and in the opinion of those present it was thought that these prices will undoubtedly prevail for some time to come."

The reports further showed that the membership of the Association now covers practically every lumber concern in the interior, and an atmosphere of mutal happiness pervades throughout. The whole purpose of the Association is to promote the general welfare of the lumber industry by bringing its different exponents together in the way of meetings, and in the dissemination of all kinds of important information from the office of the Association.

FRASER RIVER SAWMILLS—FILING ROOM, SHOWING 16-INCH DOUBLE CUTTING BAND AUTOMATIC GUMMER.

DEALERS' CONVENTION.

The annual meeting and convention of the National Wholesale Lumber Dealers' Association will be held at the New Willard Hotel, Washington, D. C., on Wednesday and Thursday, March 6th and 7th. It is expected that this convention will be the most important of any yet held by this influential Association.

MR. PETER LUND,
President Mountain Lumber Manufacturers' Association.

MR. G. P. WELLS,
Secretary Mountain Lumber Manufacturers Association.

MR. F. W. JONES,
Ex-President Mountain Lumber Manufa ..rs' Association.

ONE OF NOVA SCOTIA'S PROSPEROUS LUMBERING CONCERNS.

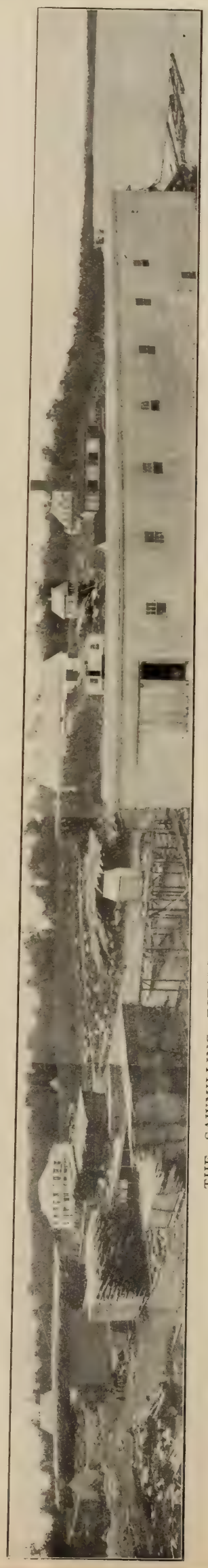
We are permitted to publish herewith a panoramic view of the lumbering establishment of Clarke Brothers at Bear River, Nova Scotia. This mill was built in 1900 and is two stories, with a length of 120 feet and a breadth of 54 feet. All pulleys, shafting, etc., occupy the lower floor, while the upper floor contains a rotary, stock gang, edger, lath mill, shingle mill, stave mill, two heading rounders, double surfacer planer, matcher and moulder, rip saw and saw sharpening machinery. The daily output of the mill in one inch lumber is 40,000 feet; lath, 15,000; shingles, 10,000; staves, 10,000, and barrel heads, 10,000.

The mill is driven by a battery of three 60 h. p. boilers and two engines of 150 h. p., the boilers and engines being so arranged that they can be used separately for light work, if required.

In connection with this plant they have about 40,000 acres of land, from which the timber supply for the mill is drawn. They have large tracts of hardwoods yet untouched, comprising beech, birch and maple, which will be cut when prices warrant. They furnish about 150,000 feet annually of 3/8 and 3/4 spruce sheathing and flooring and supply the local demand for hardwood floors and finish. They have a dry house with a capacity of 15,000 feet of lumber and furnish kiln dried stock either in spruce or hardwood whenever called for. They recently added a large warehouse for storing supplies and have erected a carpenter shop and blacksmith shop, where all the work in connection with the mill is executed.

In addition to the buildings shown in the photograph, they recently built a number of cottages for their most valuable men, so as to have an efficient force available at all times. So satisfactory has this last named feature proven that they purpose erecting during the coming season a further number of these cottages, and a little later, possibly a year hence, a public school will be established convenient to their plant so that the children may have the opportunity of conveniently obtaining an education.

The firm of Clarke Bros. is composed of W. W. and W. G. Clarke.



THE SAWMILLING ESTABLISHMENT OF CLARKE BROTHERS, BEAR RIVER, NOVA SCOTIA.

LUMBER INSURANCE.

We have lately received copies of the financial statements of the Lumber Insurance Company of New York, Toledo Fire and Marine Insurance Company, and the Adirondack Fire Insurance Company, the three companies which are under the management of the Lumber Insurers General Agency, 66 Broadway, New York. All the companies made large gains in volume of business and reasonable earnings for their stockholders.

The Lumber Insurance Company of New York is the only specializing lumber insurance company regularly authorized to do business in the Dominion of Canada. For the protection of its Canadian policy-holders it has deposited with the Canadian Government $100,000 Ontario bonds.

In conducting its business in Canada the Lumber Insurance Company of New York has nstituted a system of special inspections, and has independently mapped a very large percentage of the lumber and woodworking plants between Montreal and the Soo. Confining its business as it does to one class of business, its experience in Canada will in future years be an illustration to Canadian lumbermen of the actual loss ratio on the single class of risks in which they are interested. Quite naturally, this information is rather difficult to get in general insurance companies, whose premiums and losses on lumber and woodworking risks form only a part of their entire premium income and loss total. The support of the Company by many prominent lumbermen throughout Canada seems to assure success at least as to volume of business, and the careful selection which is being exercised in the acceptance of risks should result in a reasonable underwriting profit to the company, even at the very moderate independent rates at which they accept business.

Mr. E. D. Hardy, 11 Central Chambers, Ottawa, is the General Agent for the Dominion of Canada.

UP TO DATE METHODS IN MILL PRACTICE.

A great many so called labor saving devices have been introduced in the market of late years with a view of reducing the manufacturing costs, but few have had such a marked effect in the labor industry as the chain blocks for lifting logs, lumber, machinery and other material requiring one or more men to move.

The Yale & Towne Triplex Block which we show herewith is a new lifting device said to be generally superior in construction, capacity and convenience to anything heretofore offered. It is claimed that it will outlift and outlast any other blocks in points of economy, ease and safety. By the old way, where a half dozen men or more were required to lift a load, the same weight can be moved by one man or boy with a Triplex block. The saving in labor is obvious. These blocks can be put to various uses and their adaptability to one's requirements seems to multiply from the date of installation.

Another useful device for the ordinary mill shop is the Emmert vise. These are built in various styles from the solid jaw and stationary type to the Universal, which has all the movements of the human arm and hand and at the same time is so simple in operation that the most inexperienced workman can master it. These blocks and vises are sold by the Canadian Fairbanks Company, Limited, of Montreal, Toronto, Winnipeg and Vancouver, and any catalogs or other information is obtainable from them.

NEW OFFICERS.

Mr. Wm. Thomson, of Orillia, President of The Standard Lumber Company of Longford Mills, and Vice-President of the Standard Chemical Company of Toronto, Limited, was elected President of the Woodstock Lumber & Mfg. Company of Woodstock at the annual meeting of the shareholders held at Woodstock on the 2nd. inst.

Mr. T. H. Clarkson, of Woodstock, was

VICEGERENT SNARK HADLEY'S FIRST CONCATENATION.

Vicegerent Snark Hadley's first concatenation since his appointment as the guardian of the Eastern District of Canada is now a thing of the past, but it will long be remembered by those who were fortunate enough to participate in the event. Chatham, on the 11th of January, was the place and date. The Vicegerent Snark never did things by halves, but on this occasion he surpassed himself.

There were 39 kittens, which, with one exception, is the largest class that was ever presented to receive the various degrees. They were a high stepping, frisky lot, and they maintained their equilibrium only with great difficulty. They were all delighted with the aspect, however, and on the whole assumed their obligations audibly and in a creditable manner. The officers were :

Snark, W. A. Hadley.
Senior Hoo-Hoo, N. H. Stevens.
Junior Hoo-Hoo, O. H. Vogt.
Bojum, A. Heinkleman.
Scrivenoter, E. A. Drake.
Jabberwock, C. H. Belton.
Custocatian, W. J. McBeth.
Orcanoper, B. H. Stewart.
Gurdon, W. T. Piggott.

The kittens were :

J. B. Blonde, Chatham.
P. G. Piggott, do.
J. C. Pritchard, do.
A. O. Ludlum, Leamington.
Chas. Ferguson, London.
W. F. Blight, Chatham.
G. W. Sullman, do.
W. B. McNearnie, Wallaceburg.
W. E. Woodruff, Chatham.
J. C. Couper, do.
W. M. Draden, do.
C. D. Hubbell, Thamesville.
F. F. Kessel, Wallaceburg.
G. F. Hobart, Toronto.
R. T. Asher, Chatham.
F. J. Doyle, do.
A. F. Falls, do.
Geo. Massey, do.
W. E. Gundy, do.
R. T. Scott, do.
A. R. Cade, do.
G. J. Fielder, do.
F. Crow, do.
A. E. Hodgins, Toronto.
J. T. Anderson, Wallaceburg.
J. E. Perwell, Toronto.
Thos. W. Horn, do.
F. H. Herbert, do.
W. F. Scott, do.
R. N. Young, London.
J. W. Anderson, Chatham.
E. P. Tremlin, do.
W. E. Hall, Blenheim.
J. F. Mount, Chatham.
W. Barratt, Woodstock.
S. J. Sullivan, Chatham.
W. C. Armstrong, do.
J. M. Johnson, do.
D. E. Wallace, Thamesville.

The others present were : W. C. Laidlaw, Toronto ; Chas. C. Morris, Toronto ; H. Bennett, Toronto ; R. B. Gardner, Hamilton ; J. H. Lobiler, Sarnia ; H. Turnbull, Sarnia ; A. E. Hall, Sarnia ; C. E. Stoody, Sarnia ; C. H. Belton, Sarnia ; F. W. Shaw, Sarnia ; John Anderson, Wallaceburg ; Neil Watson, Mull ; W. M. Fleming, Chatham ; T. O. Leitch, Ridgetown ; W. J. Lovering, Toronto ; Jas. Innes, Chatham ; M. H. Brown, Toronto ; J. G. Cane, Toronto ; Chas. Hadley, Chatham ; A. C. Egleston, Chatham ; W. M. Hood, Chatham ; Jas. Hadley, Chatham ; Donald Ferguson, London ; J. M. Baxter, Chatham ; F. C. Henderson, Toronto ; J. C. Holtby, Toronto ; T. J. Buller, Ridgetown ; W. R. Hall, Chatham ; J. Anderson, Chatham ; Chas. L. Bailey, Toronto ; A. E. Gordon, Toronto ; W. W. Skane, Chatham ; Frank Morse, Midland ; C. D. Ten Eyck, Toronto ; W. J. Rutley, Chatham ; Ed. Fennell, Toronto ; R. Scott, Chatham ; F. S. Mickey, Detroit ; Jos. Wetchschelberger, Toronto ; C. Bechard, Chatham ; S. R. Higgins, Toronto ; F. H. Laird, Dresden ; W. V. R. Reynolds, Toronto ; Ward Sutherland, Galt.

After completion of the initiation ceremony, the party adjourned to the Garner House, where mine host McCaig did things in the most approved manner, establishing more firmly than ever a deep affection for Chatham in the hearts of his guests.

A. H. Clark, K.C., M.P., Windsor, was a guest at the banquet, and replied to the toast of "The Legislators of Canada." He spoke very strongly in respect to reforestration, and his hearers were evidently very much in sympathy with his views, judging from the applause he received. Mr. Stevens also spoke on the same subject. Mr. Harry Bennett, of Toronto, was there with his voice, and made things merry.

Ward Sutherland, who was about to leave for a trip around the world, made a farewell speech.

Messrs. Scott, Hodgins, Pritchard and Brown replied to the toast of "The Railroads," and although they were called "robbers," they certainly squared themselves with those present.

W. W. Skane had "something to say right now," and proceeded to say it. He said they "had striven with their greatest utmost" to make the concatenation a success, and every person agreed with him that they had done all that and even more.

Jas. G. Cane, of Toronto, upheld the reputation of his city for producing "good men and true" in a speech which was worthy even of Toronto.

Mr. Donald Ferguson responded to the toast of "The Supreme Nine," and the things he said about "Bill Hadley" would make any other man than "Bill" get a hat a few sizes larger. The applause which greeted his remarks proved that, in the words of the patent medicine advertisement, "there is nothing just as good" as W. A. Hadley in the affections of the assembled Hoo-Hoo.

The assembly broke up in the "wee sma' hours," some of the members leaving before the "finale" to catch a 3.18 a.m. train.

After Initiation.

The Lamentations of the "Its."

(TAKEN FROM LIFE)

I was at the Hoo Hoo slide
Martha Jane;
And I am not keen to ride
There again;
For the things on which I sped
Sent me limping off to bed,
And I woke up with a head
Streaked with pain.

O, the goat ride I took
In my glee
Every inspiration shook
Out of me;
For the moment that I struck
On that horn he wears for luck,
You had ought to see him buck—
Hully Ghee!

I've a warping of the spine,
Martha dear;
And my ribs are out of line,
Too, I fear.
Every organ that I own,
Every ligament and bone,
Every blooming thing seems thrown
Out of gear.

O, I dare'nt tell it all,
Dear, for it
Would treat you to a fall
In a fit;
Daren't tell you of the fun
While the work was being done
And the hand-shaking begun—
Nit, O Nit!

Now I am a Hoo Hoo, Martha dear,
Don't you see?
And I need no longer fear
That Degree
And I'll sit with gleeful pride
And watch other victims ride
Down that old buse-burning slide
Same as me.

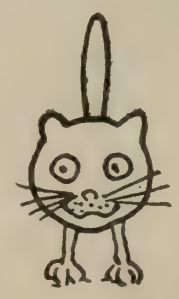
ANNUAL CONVENTION OF WESTERN RETAILERS.

The annual convention of the Western Retail Lumbermen's Association will be held in the Odd Fellows Hall, Main street, Winnipeg, February 13 and 14. It is expected that this will be the greatest gathering of lumbermen ever seen in the West, as it will be held during the annual "Bonspiel" or curling carnival.

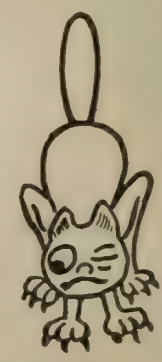
The grand annual "round up" of the stray cats will also be held at the same time and great preparations are being made for the event.

The call issued by Vicegerent Snark James A. Ovas contains the following command:

Ye that sigh for the companionship of the best of fellows in this wild and woolly west, obey the command of the "Great Black Cat," and intimate your desire to partake of these convivialities of this occasion by making your application to the Vicegerent, who will duly notify you of the acceptance of your petition. Come in out of the cold to our "fragrant bowers;" the invitation is not always going."



How the North Western kitten will look before initiation at Winnipeg at the annual "round-up"



and after his claws have been sharpened.

HOO-HOO IN THE MOUNTAINS.

Largest Individual Concatenation Ever Held on the Pacific Coast.

That the great Prince of Hoo-Hoo has secured a hold on the hearts of the lumbermen in British Columbia was fully demonstrated at the concatenation at Nelson on January 16. At this, the first ever held in the interior of British Columbia, exactly eighty playful kittens were ushered, with befitting ceremony, into the light of Hoo-Hoo land. Of this number seven—Messrs. MacKinnon, Simpson, Martin, Goepell, Gall, Simmons and Anstie—were accorded especially vigorous treatment, much to the delight of the remaining seventy-three kittens and the large number of old cats who had come from the coast and from Spokane to assist in the tortures.

After the suffering kittens had undergone sufficient test of their eligibility to follow in the wake of the Sacred Black Cat, all repaired to the dining hall of the Strathcona, where Mine Host Tompkins, under the direction of the able and efficient secretary of the Mountain Lumber Manufacturers' Association, had prepared a delectable and bountiful repast. Over 100 sat down, the chair of honor being ably filled by Vicegerent Snark J. D. Moody, of Vancouver, on his right being Mr. Peter Lund, and his left Mr. F. W. Jones, the president and past president respectively of the Mountain Association.

The menu card itself was a work of art handsomely gotten up, with a picture of the Hoo-Hoo cat enclosed on the front cover.

The menu inside was as follows:

CAT-EGORY

ALL WORK CALCULATED ON UNKNOWN CAPACITIES

BLUE POINTS F. O. B. HALF SHELL

OLIVES — FROM THE KATS KILLS

CELERY — FROM KAMS-KAT-KA

FLUID SOUP

EASILY LAPPED

AMONTILLADO

PLANKED SALMON

CATNIP SAUCE

CRAB IN SHELL MAYONNAISE

D I S, NUDE ON THE OTHER

PONTET CANET

YOUNG TURKEY NO. 1 SELECT

DRESSED ALL SIDES-EDGED WITH CHESTNUTS—TRIMMED WITH CRANBERRIES

POTATO CROQUETTES AIR DRIED

FILLETS OF BEEF

LARDED, YARDED AND GUARDED BY THE NIGHT WATCHMAN

MUSHROOMS OR ANY OTHER ROOMS MAY BE OBTAINED AT THIS STAGE

MUMMS

HURRY-CAT VERTS

Finishing

PLUM DUFF — ICE CREAM MOULDED NO. 999

PUSSY CAFE — OIL CAKE

JAM — GRAPES

WINDOW AND DOOR — FROM THE SAW ARBOR

After the good things had been disposed of, Mr. Moody in a few words referred to the excellence of the spread, which he said was the equal of anything he had ever seen, either in Canada or across the line. He also spoke of the great work done by Mr. Wells, through whose untiring efforts chiefly the present successful concatenation had been brought about. Mr. Moody then called upon Mr. F. W. Jones to take the chair and become toast master, but before resigning the chair he asked that those present fill their glasses and drink to the health and long life of "The King". This was heartily responded to by the singing of our National Anthem.

Mr. Jones, on taking the chair, proposed the health of President Roosevelt, which was also heartily received and the American National Anthem sung.

The succeeding toasts were proposed and responded to as follows:

"The Hoo-Hoo Order," responded to by Messrs. J. P. McGoldrick and A. W. MacKenzie of Spokane, and J. W. MacKenzie of Portland, Ore. This was followed by a couple of amusing selections in song and elocution given by Mr. John Boyd, of Boyd, Burns & Company, Vancouver, which were enthusiastically received, and appreciation shown by a toast to Mr. Boyd, to which he replied by further selections.

"The Lumber Industry of British Columbia" was then proposed, and coupled with it were the names of Mr. R. H. H. Alexander, Vancouver, Mr. A. Leitch, Cranbrook, Mr. T. Frank Paterson, Vancouver, and Messrs. Otto Lachmund and Y. Ludgate, of Arrowhead.

Mr. Hall, of Spokane, then favored the gathering with a song which was greatly appreciated.

"The Banking Interests of Canada" was replied to by Messrs. Phipps and Lay, both new kittens.

"The Supply Men" drew forth a fitting speech from Mr. H. B. Gilmour and a comic story from Mr. Geo. Downey.

"The Retail Dealers" were represented by Mr. W. H. Clark of Edmonton, also a kitten.

"The Mountain Lumbermen" was connected with the names of Messrs. Peter Lund and A. E. Watts.

"The Press" drew forth speeches from F. E. Simpson, of the Cranbrook Herald, A. W. Dyer, of the Nelson News, and Geo. A. Gall, of THE CANADA LUMBERMAN.

This was followed by a duet rendered by Messrs. D. J. Bissell, jr., and A. L. Porter.

In proposing the toast "The Secretary of the Mountain Lumber Manufacturers Association," the chairman gave expression to some very ernest remarks about the way in which Mr. Wells had worked in bringing the concatenation to such a successful issue. Mr. Wells in responding said that he appreciated very much all that had been said about him and gave great credit to the able co-operation of Mr. Moody and the Mountain lumbermen, in the arrangements.

Mr. Anstie and Mr. E. I. Kelly responded to the toast of "The Ladies."

"Our Host" was greeted by the singing of "He's a Jolly Good Fellow." Messrs. Bissell and Porter each then favored the company with songs, this being followed by the singing of "Old Black Joe" by one of the Sons of Africa who had been waiting on the tables, everybody joining in the chorus. The hands of the clock by this time having swung round to nearly the time when the cock begins to crow, the company broke up.

The Hoo-Hoo team which came up from Vancouver to usher the kittens into the Light, consisted of Vicegerent Snark J. D. Moody, T. F. Paterson, P. Lindsay, R. H. H. Alexander, H. B. Gilmour, A. J. Burton, John Boyd and Geo. Downey. These were ably assisted by a delegation from Spokane, Seattle and Portland, consisting of J. P. McGoldrick, Wm. MacKenzie, D. J. Bissell, jr., A. L. Porter, A. C. Archer, J. W. MacKenzie, A.K. Ford, Ed. I. Kelly, C. N. Thomas, and a half a dozen others.

The following is a list of the candidates:

George Pendleton Wells, secretary Mountain Lumber Manufacturers Association, Nelson, B. C.; Patrick John Gallagher, Lumberman, Summit, B. C.; Albert Edward Phipps, Revelstoke, B. C.; James Murray Lay, Nelson, B. C.; Rayneile Hinton, Nelson, B. C.; Frederick Harding Hale, president and manager North America Land & Lumber Co., Fernie, B. C.; Peter Edmund Wilson, Cranbrook, B. C.; Alfred Edward Watts, manager A. E. Watts Lumber Co., Wattsburg, B. C.; Cleveland V. Hall, Nelson, B. C.; Thomas E. Finn, manager Palliser Lumber Company, Palliser, B. C.; Richard Awrey Quance, secy-treas. Jewell Lumber Company, Jaffray, B. C.; Charles Masheter Edwards; James Farquharson Macleod Pinkham, Cranbrook; Frank Lionel Giles, Lamb Watson Lumber Co., Arrowhead; Daniel R. Tait, Lumberman, Greenwood; Ronald Lansie Brown, Nelson, B. C.; Ingold Case Schemerhorn, manager East Kootenay Lumber Company, Cranbrook, B. C.; Percy Francis Cooper, business manager, H. MacLean Publishing Co., Vancouver; Richard Arthur Simmons, salesman, Vancouver Rubber Co., Vancouver, B.C.; Arthur Ward MacKinnon, representative, Wm. E. Barrett & Company, wholesale lumber, Spokane, Wash; Clarence D. Goepel, agent Canadian Oil Co., Nelson, B. C.; Harry Edgar Douglas; George Anthony Gall, western representative CANADA LUMBERMAN, Vancouver, B. C.; Edward John McGaghern, Lamb-Watson Lumber Co., Arrowhead; Denis St. Denis, Slocan City, B. C.; George William Orchard, Porto-Rico Lumber Co., Moyie, B. C.; George Arthur Laurie; Frank Cameron DuBois, superintendent, Elk Lumber Co., Fernie, B. C.; George Fred. Robinson, Fernie Lumber Co., Fernie; James H. Ellis, accountant, Yale Columbia Lumber Co., Westley, B. C.; Orrin A. Maybee, Bowman Lumber Co., Nakusp; Herbert Bailey; James M. Cameron, foreman, Bowman Lumber Co., Nakusp; William Newton Poole, accountant, Yale Columbia Lumber Co., Nelson, B. C.; George Alexander Leitch, Cranbrook, B. C.; William A. Anstie, Sales Department Mountain Lumber Manufacturers' Association, Nelson, B. C.; James Thomas Martin, Fairbanks Co., Vancouver; Orville L. Boynton, general manager Elk Lumber Co., Fernie; Samuel Thorp, Yale-Columbia Lumber Co., Nelson; Simon Taylor, Elkmouth; Charles Duncan McNab, general manager Standard Lumber Company, Baker, B. C.; Roland Leigh McBride, Nelson; Edgar Robert James Forster, manager Sparwood Lumber Co., Sparwood, B. C.; Hamilton Byers, Nelson, B. C.; Frederick E. Simpson, Cranbrook, B. C.; John Alexander Dewar, general manager, Porto Rico Lumber Co., Nelson, B. C.; William Henry Houston, accountant, Yale Columbia Lumber Co., Nelson, B.C.; D. R. Yates, manager, Otis Staples Lumber Co., Wycliffe, B.C.; Joseph Genelle, lumber manufacturer, Nelson, B.C.; Edward Swift Home, accountant, East Kootenay Lumber Co., Cranbrook, B.C.; Peter Lund, general manager, the Crow's Nest Pass Lumber Co., Wardner, B.C.; Frederick William Jones, secretary-treasurer, the Columbia River Lumber Co., Golden, B.C.; Charles Frederick Lindmark, president, Revelstoke Sawmills, Limited, Revelstoke, B.C.; Alexander McDougall, president, the Fernie Lumber Co., Fernie, B.C.; William Farquhar Gurd, Cranbrook, B.C.; George Samuel Agar, Koch Lumber Co., Nelson, B.C.; William Charles Ernest Koch, manufacturer lumber, Nelson, B.C.; Theodore Ludgate, manager, Big Bend Lumber Co., Arrowhead, B.C.; Herbert Grant Hoppins, Lamb Watson Lumber Co., Arrowhead; Frank Llewellyn Buckley, manager, A. R. Rogers' Lumber Co., Enderby, B.C.; Weldon Fraser Boyer, A. R. Rogers Lumber Co., Enderby; Harry Wright, Member of Legislative Assembly, Ymir B. C.; David Breckenbridge, Pres. Crow's Nest Pass Lumber Co., Limited, Wardner, B.C.; Bertram Cecil Travis, Nelson, B.C.; Alexander George Lambert, lumber manufacturer, Nelson, B.C.; Malcom McInnes, manager McInnes Lumber Co., Elkmouth, B.C.; Malcolm Briggs King, manager, King Lumber Co., Cranbrook, B.C.; Walter James Riddel Robertson, sec.-treas., Yale Columbia Lumber Co., Nelson, B.C.; Alexander Moffatt, East Kootenay Lumber Co., Cranbrook, B.C.; George Keith March, Mayook; Robert Burns Benedict, manager, Mayook Lumber Co., Mayook, B.C.; Edward Blake McDermid; Andrew Nelson Winlaw, lumber manufacturer, Winlaw, B.C.; Aaron Hartt Kelley; William Harold Clark, manager, W. H. Clark Planing Mills Co., Edmonton, Alta.; Archibald Kenneth Leitch, pres. East Kootenay Lumber Co., Limited, Cranbrook, B.C.; William Ernest Cooke, lumber manufacturer, Kaslo, B.C.; Arthur Henry Gracey, Nelson, B.C.; John R. Martin, Deputy Timber Inspector, East Kootenay, Nelson, B.C.;

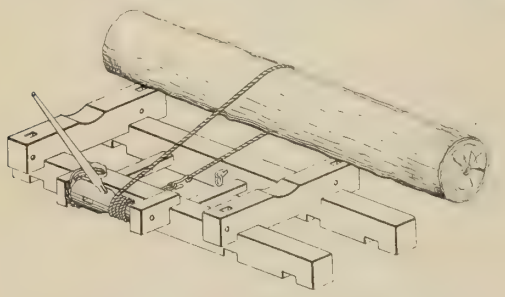
Banking Ground in Northern Wisconsin containing About 80,000,000 Feet of White Pine all Loaded by McGiffert Log Loaders.

EVOLUTION OF THE LOG LOADER

By NORTON MATTOCKS.

The greatest savings bank in the world, and one which yields the largest interest, is none other than old Mother Earth, but, fortunately through a wise provision of nature, the only keys destined to unlock her richest treasures were necessity and progress—the need of this wealth and the knowledge of how best to secure and use it.

It is a peculiar fact, however, that these riches, lumber, coal and iron, the very life-blood of our present industrial age, have remained practically untouched through countless ages until modern advancement demanded their use, and man's brains devised means for profitably utilizing them. It has been easier and cheaper for man to substitute or do without than to entail the labor and expense of doing

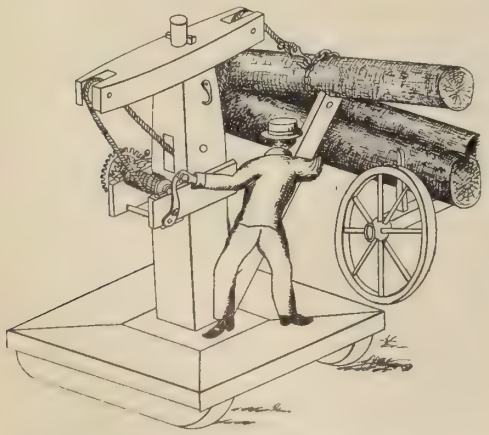


A-1857—Device for Wagon Frame.

it by hand. Especially has this been true of forest products.

Scattered as are our forests, all over the earth's surface, older, also, than man himself, and so closely allied with his temporal wants ever since he needed a roof over his head, lumber has been more or less used in all ages, but its general use as a merchantable product has been restricted largely because man's methods were too crude, and the work too slow and laborious.

Unlike other forms of building material, which could be handled in small pieces, the greatest obstacle operating against the general use of lumber



B-1868—See Manner of Placing the Log.

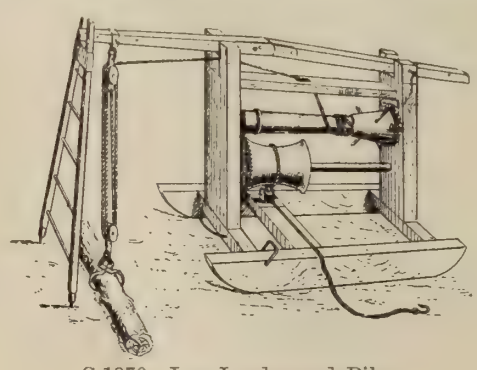
was its large bulk, and the difficulty of reducing it to serviceable form. Consequently not until the invention of the steam saw mill did man set his face toward the forest with commercial intent, and not until recent years, when changed condititons of living created a demand for lumber in a thousand and one different forms, and the horse sled gave way to the logging train, has the lumber industry really "come into its own."

While the prime object in most forms of production has been the lowering of costs, in few fields of operation has this possibility been greater (and the development slower), than in the handling of logs "from the stump to the saw mill."

Where bulk weight is the principal characteristic, the matter of time and expense in handling are everything to the producer, therefore the most logs and the fewest men are of paramount importance in the lumber camp.

While on the handling of logs depends so largely the cost of the finished product, it is a most peculiar fact that only in the last handful of years has this phase of lumber operation undergone radical improvement, and even on the fingers of the hand may be counted the years that have witnessed the development of a devise that has revolutionized log loading. The following brief outline of the growth and history of loading devices will prove interesting to any who have followed the progress of this modern and wonderful industry.

In the problem of loading a product located at widely scattered points, two things are to be considered; firstly, the most rapid and economical form of loading; secondly, a device, such as can also be quickly and readily transported from place to place with a minimum of delay and maximum of efficiency.



C-1870—Log Loader and Piler.

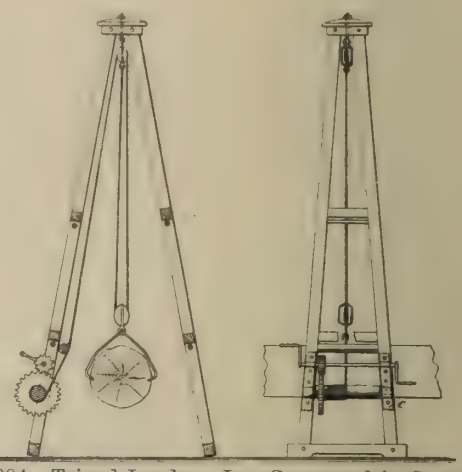
The one advantage a log possesses over other bodies is that being of a cylindrical form it may be rolled up an incline plane instead of lifted, and this natural form of leverage has always been followed, and (unfortunately for the operator) is still to a very large extent, applied at the present time.

In an attempt to improve on this process, a device (Cut A) was invented in 1857. While the principle is exactly similar to that still employed in many operations, its evident intent was to eliminate the horse either as a matter of convenience, or to save horses, the substitute being a fixed winch, fastened to one side of the carriage bed, and operated by a removable lever. The only apparent advantage in this contrivance was the ratchet feature, which guarded against the log slipping back, a virtue which was more than offset by the slowness of the process.

Cut B illustrates one of the earliest forms of a logging derrick erected on a movable base and placed alongside of the load.

Invented in 1868, this appliance apparently departed from the usually accepted forms of hoisting devices, in that the log, having been raised to the side of the carriage, was placed on the load by being lowered on to the end of a pivotal leg, which, as the log descended, was swung out by its own weight to the desired point on the load. While its superior points are not apparent, the fact that it rested on skids shows that the inventor recognized the necessity of a portable device which could be readily dragged along the ground to the various points for loading.

A later contrivance, known as a log loader and piler, shown in Cut C was patented in 1870, designed for loading wagons. This machine was also built on runners to facilitate its being moved from place to place. It embodied one feature, however, which was a decided step in advance over former styles, that of having the load suspended directly over the wagon, and instead of a single rope for hoisting, suitable tackles and fall were used, and operated by horses in place of man power, as heretofore. The power was applied to a geared drum, which, in turn, rotated a geared winch located above it. Around this winch



D-1884—Tripod Loader. Log Supported in Center.

was wound the tail-end of the tackle rope. In operation the log was first raised and held in place by a ratchet attachment. With the log in this position, the conveyance to be loaded was backed in or driven under the log, and by means of the spokes shown in cut was lowered as desired.

In 1884 was conceived another loading derrick (Cut D) in the form of a movable tripod, operated by hand, which also suspended the log directly over the vehicle to be loaded, and using block and tackle. As a means of securing greater speed and economy, the desirability of this arrangement for loading logs is not very evident, though compared with the methods then in vogue, it doubtless possessed some redeeming feature.

While these earlier types of machines appear crude, and in reality were, it must be remembered that the lumber industry at that time had not reached a stage which demanded the same degree of speed and economy as now confronts present-day operators. Consequently, because of the limited output at that time, mechanical experts had given this subject but passing notice, and every operator was his own inventor. At the same time, these devices, while showing the varied ideas as how best to load logs, all emphasize the fact that this loading question was a highly important problem, and that constant effort was being put forth towards solving it, in the most economical manner. It is not our intention, therefore, to criticize or belittle these earlier efforts fur-

ther than to show by comparison the wonderful revolution which has taken place in this phase of our lumber industry.

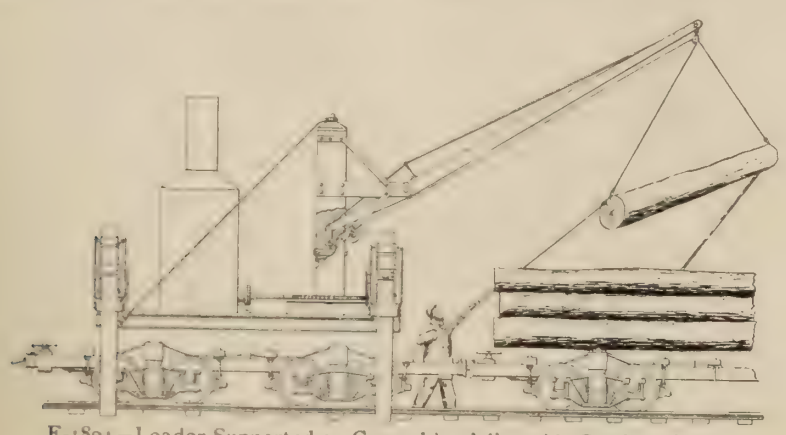
With later years, however, the situation has taken on an entirely new aspect, for with twice as many consumers, and the demand increasing with tremendous strides, with the logging train now a necessity, and lumbering conducted on a scale hitherto unknown, with hungry, high speed band and gang saws, and automatic feed literally eating up the saw logs and cutting down costs at every turn, with lumber entering into thousands of new forms of manufacture, this problem of "cheaper delivery at the mill" has become a matter of most serious thought.

Since the logging car and logging railway have become necessary adjuncts to modern lumbering, it is self-evident that in handling logs in such vast quantities, the matter of economic loading became a necessity. Up to twelve or fifteen years ago, loading by machinery was quite unusual; in fact it is only within the last four or five years that any considerable portion of the logs handled were loaded in this way. That a clearer understanding of why steam loading has become so imperative, let us briefly take up the conditions under which the logs are collected.

F-Decker Loader Loading First Logging Car, with Another "Ready."

While the method of realroad logging varies necessarily according to conditions, as a general thing, a main line of the road is run through the body of timber to be cut. From this main road, lateral branches are extended at such intervals as to render the lumber to be handled accessible to the road. These branch roads, being very temporary in their nature, and constructed as cheaply as possible, with few switches or side tracks, the logs, in order to reduce hauling expense, are brought to the nearest point on the railroad, with the result that loading must be done at frequent points along the track, and with only a comparatively small quantity at each point.

It is necessary, therefore, in order to load cheaply by a steam derrick, that it should be readily and quickly removable from point to point along the road.



E-1894—Leader Supported on Ground by Adjustable Spuds or Legs.

As the only practical method of moving this derrick is to transport it over the same track, and as the time of moving it from its position over to a position at the side of the track would be very considerable, it was necessary to devise a machine which could be transported upon and remain over the logging road, and which would not interfere unnecessarily with the free passage of the cars along such track.

Under the stress of necessity, modern ideas have worked out this problem along two separate and distinct lines, which devices have, in turn, been vastly improved upon by a machine embodying all the good points of each method and eliminating the defects.

In loading logs on cars, there could be but two positions for the loader, that of resting either on the car or on the ground, and it was along the former principle that the first machine was designed.

The first practical steam loader, therefore, that came into general use, was invented in 1885, consisting of a derrick mounted on wheels, and so arranged as to run upon a track laid on the deck of the logging cars. In order to avoid interference of the rails on each car when passing sharp curves, these rail sections were necessarily shorter than the car length, the interval being connected with U or cross-shaped sections, over which the loader could be passed from one car to another, until the entire train had been loaded, at which time the loader would remain on the last car. Every time a loaded train was pulled out, and an empty substituted, it was necessary to switch the loader car back to its first position, and the process of loading repeated.

When several cars were to be loaded in one place both train and loader had to be moved for each car. It is also obvious that the empty cars to be loaded were necessarily kept coupled together, so as to form a continuous track for the loader. This loader was such an improvement over former methods that it marked an epoch in modern logging, and was the forerunner of greatly reduced costs in log handling, and the beginning of better things for the progressive lumberman.

Another loader of the same general type appeared some time later, and, while constructed and operated along similar lines, the main differences were in its track principle, this machine using portable sections, instead of the permanent track for each car.

Two sections were used, on one of which the loader rested while the other was picked up by the boom and swung around to the rear, as it became necessary to move from car to car.

A still different style of machine followed a few years later and was known as the Rapid Loader. This contrivance also rested on the car but was far simpler in its make-up and operation. And instead of moving along on rails, the entire mechanism rested on two long steel runners curved at both ends which was readily slid along the deck of the car. It possessed a further advantage of being portable and besides being adaptable to any form of logging or flat cars, it was also available for use on logging sleighs or placed on the ground for decking.

The three last forms of loaders represent the principle of loading from the car, and though very efficient machines under certain circumstances, and embodying many excellent points, they also lacked certain features, one of which was their inability to load several cars from one spot without moving the loader, a very desirable requisite, especially where a considerable quantity was to be loaded at a given point. To obviate this difficulty, and eliminate the necessity of switching the loader back to the other end of every empty train, and also to facilitate greater speed in spotting cars another device was introduced (Cut E), based on a different principle.

G-McGiffert Loader Loading First Tier on Large Flat Car—Observe Method of Passing Under.

This arrangement consisted of a derrick and derrick-supporting platform, which was blocked up in position over the track, the blocking being of sufficient height and width to allow an empty car to pass between the supports and under the derrick platform. Placed upon any car, it was moved from point to point along the track, and when in position, was capable of loading several cars without moving.

The earlier forms of this machine consisted entirely of blocking, but this blocking feature later developed into adjustable spuds or legs, so that the derrick platform could be raised or lowered as conditions demanded. This type of loader came into use about 1894,

H-A Southern Operation Showing a McGiffert Loader Skidding Logs—Note the Empty Logging Train being Backed under Machine, Preparatory to Loading.

and about four years later other similar forms of loaders appeared, based on the same principle, but showing considerable improvement, so that less time was lost in the transporting and setting up of the ma chine.

With the many splendid points, however, in the various loaders, up to this time they all lacked that almost necessary feature of self-propulsion, a virtue of such vast importance, especially where the loading is conducted at various and widely separated points along the line. Then, too, the element of delay in moving both cars and loader for every change of base, the wear and tear on the cars themselves, the dependence at all times on the switch engine, the waste of time in getting ready to load, the possibility of blocking the main line in the absence of a locomotive—all these objectionbale features had to be eliminated, with the result that the first self-propelling machine made its appearance about six or seven years ago, (see Cut F), and to Mr. George W. Decker, of Newport, Ark., belongs the credit for this invention. Besides overcoming the defects above mentioned, this machine possessed greater weight and strength and, in many ways, excelled all former efforts.

Designed along new lines, and of heavier construction, this loader was composed of an upper and lower deck, and rested on ordinary car trucks, upon which it transported itself along the track. The upper platform, containing the engine and derrick mechanism, was supported by legs or standards, extending up from the lower deck, and placed sufficiently apart laterally to permit a logging car to pass between. Upon the lower deck was laid a portable section of track, extending from end to end of car, and of the same gauge as that upon which the loader was operated.

At either end of the portable track, pivotal rails were connected in such a manner that they might be lowered so as to engage the rails of the stationary track and thus allow the passage of the logging car over and through the loader.

The coming of this improvement therefore changed the former log loader from a machine, entirely dependent on the switch engine and local conditions, to a device which (in a larger measure) could control its own conditions as to switching, spotting and loading cars, an innovation which proved as valuable outside of the saw mill as any former invention had proved of value inside.

But as conditions attending lumber operations have been changing, so too, has it been necessary to change the loaders to meet these conditions.

For instance, the almost marvelous strides made in commercial and industrial lines have not only forced the railroads to double and quadruple their equipment but demanded larger and longer cars as well and instead of from 30,000 to 40,000 capacity flat cars with 34-foot lengths, their average capacity has more than doubled, their length increased to forty feet with a weight correspondingly greater. It is obvious, therefore, that with lumber playing such a leading role in the demands on transportation, the use of larger cars for moving logs has become so general that the method of loading these large cars necessitated a machine adapted to their special needs.

In this age of progress and lightning development changed conditions go hand in hand with modern improvement and the question of yesterday is solved over-night. The solution of this final problem is due to Mr. John R. McGiffert, of Duluth, Minn., U. S. A.

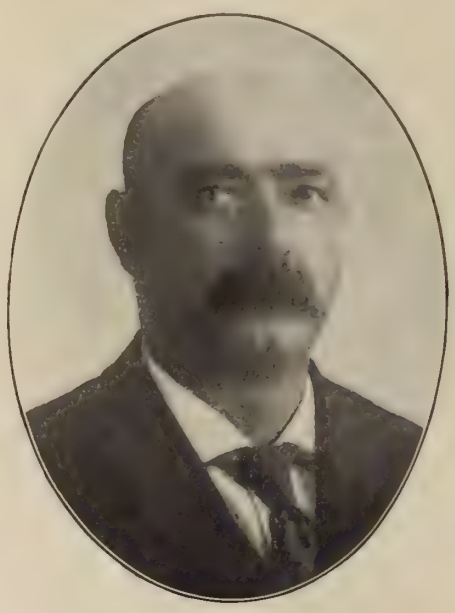
By referring to Cuts F and H it will be seen that the McGiffert was as different in its general make-up as was the Decker over its predecessors. By increasing the lateral distance between the supporting legs and curving in their lower extremities (which were fitted with shoes) ample room was provided for any width car, at the same time permitting the whole mechanism to rest on the ties, thus eliminating the lower deck and by a further ingenious arrangement of having the supporting pivotal trucks hung from the under side of the deck and hinged so that they could readily be swung outward and up, thereby allowing the loader to settle on the ties, it made possible the free passage under and through the loader of any size car, any number, with any form of coupling and at any desired speed.

With the perfecting of these two machines it was no longer necessary to strain or wear out the cars by loading from their deck. Neither was there any restriction in loading cars on a narrow fill, on soft, swampy ground or on a trestle, conditions which seriously handicapped the use of the loader supported on spuds or blocking, for with the machine at all times resting on the track or ties and so arranged that its empty cars could run under and past the loading mechanism at the will of the operator, with its own propelling power enabling it to move itself, its empty or loaded cars under any and every condition, it would appear as though the problem of economy in log loading had at last been solved.

While the Decker and McGiffert Log Loaders belong to the same class so far as general operation is concerned, each machine possesses special advantages, the Decker being best adapted for logging roads where wooden or light steel rails are used. The McGiffert, on the contrary, is best adapted where heavier and longer cars are loaded, and because of its wider base it is also a superior machine for skidding logs when desired.

THOMAS R. ALLISON.

Thomas R. Allison is among the most experienced and best known mechanical and contructing engineers in Canada to-day. He was born in Ingersoll, Ontario, on the 2nd of October, 1858, and is therefore just past 48 years of age. When 16 years of age he left



MR. THOMAS R. ALLISTON.

Ingersoll and went to Hamilton as an apprentice in the Northey Engine works, and it was there that he received a thorough schooling in the branches of mechanics known as turning and fitting. Since completing his apprenticeship, Mr. Allison has held almost continuously some responsible positions as chief engineer for the construction of large works. He designed and built the Dominion Pulp Company's sulphite mill at Chatham, N. B., in ten months' time and was chief engineer and mechanical superintendent of the Maritime Sulphite Fibre Company's mill at Chatham, N. B., for four years, and superintendent of the Spanish River Pulp Company's mill at Espanola, Ontario. He was also chief engineer of the St. Anthony Lumber Company's mills at Whitney, Ontario, and was superintendent of machinery for the Montreal Cotton Company at Valleyfield, Que. Mr. Allison now has offices in room 23, Canada Permanent Building, 18 Toronto Street, Toronto.

NEW LOGGING CONCERN.

The logging and lumber industry of Britiah Columbia has recently been augmented by the advent of the H. L. Jenkins Lumber Company , a corporation from the State of Maine, with a paid-up capital of $1,000,000.00. The campany contemplates erecting a large mill and will engage in the export and rail trade. The mill site has not yet been decided upon, but will be located either on Burrard Inlet, near Vancouver, or on the company's own timber limits. At present this campany is operating mills at Douglas, B. C., and Blaine, Wash. In addition to their timber holdings in the State of Washington they have purchased 75,000 acres of timber limits and lands in British Columbia. At present they operate six logging camps in this Province, three of which are situated on Burrard Inlet, and the others on Howe Sound, employing in all about 250 men. Their new sawmill when complete will be thoroughly up to date in every respect, and will class among the larger sawmills of the province.

The Vancouver Timber & Trading Company, of which Mr. Jenkins is president has been operating in British Columbia for the past two years. The general offices of this Company and also of the H. L. Jenkins Lumber Company are located in the Flack Block, Vancouver. Mr. Jenkins, who has for the past fifteen years been a resident of Minneapolis, Minn., being engaged in the lumber industry in that city, has removed to Vancouver, where he expects to make his home in the future. He is an enthusiastic believer in the furture of British Columbia.

LARGEST MILL IN THE WORLD.

The American Lumberman credits the Port Blakely Mill Company, of Port Blakely, Wash., with owning and operating the largest sawmill in the world, the daily capacity being 360,000 to 400,000 feet, and total cut in 1905 134,000,000 feet. We learn that this mill is equipped with one 10-4inch band head saw; one twin circular head saw; one 8-inch double cut carriage resaw; two 8-inch single cut carriage resaws; one band roller resaw; three edgers; rip raws; planers; gang trimmers, and slashers.

We have in Canada a mill equally as large as and probably larger than that of the Port Blakely Mill Company. It is owned by Mr. J. R. Booth, of Ottawa, and has a capacity of between 350,000 and 400,000 feet per day of ten hours.

Although operated only during the summer season, the cut in 1905 was 115,000,000 but it is altogether likely that the timber for the Port Blakely mill is much larger and longer than that which is found in the Ottawa Valley, and acordingly Mr. Booth's mill is at a disadvantage from the standpoint of maximun output.

Given logs of equal size, we believe Mr. Booth's mill could substantiate the claim of being thelargest mill in the world. Before his mill was destroyed by fire some year ago the capacity was about 1,000,000 feet in eleven hours.

THE LATE NATHANIEL DYMENT.

Mr. Nathaniel Dyment, the wealthy lumberman and head of the firm of Mickle, Dyment & Son, passed away at his residence in Barrie, Ont., on February 4th, aged 74 years. He had only been ill about two weeks, but from the first it was feared that he would not recover.

Mr. Dyment was born in Exeter, Devonshire, England, on December 25th, 1832, and came to Canada with his parents when three years of age. His younger days were spent on his father's farm in Beverley Township, Wentworth County. When 16 years of age he left the farm and started in business for himself. His early lumbering operations were in the townships of Ancaster and Beverley fifty years ago, when he was but a youth of seventeen. His first transaction involved one pine tree, which he purchased for a dollar. This dollar he earned by cutting two cords of wood. In Ancaster and Beverley there were originally rich pine forests, and Mr. Dyment

THE LATE NATHANIEL DYMENT.

soon established a large business and built several other mills on the line of the Great Western Railway.

About twenty-five years ago Mr. Dyment extended his operations into Simcoe County and the North Shore and built larger mills, the organizing of the present great lumber firm of Mickle, Dyment & Son being effected in the year 1886. He is also largely interested in the Salmon Lumber Company, Toronto; the Dyment-Baker Lumber Company, London; the London Box Company and the A. Dyment Lumber Company, Thessalon. Twenty-five years ago, in conjunction with Shortreed Bros. and Robt. Laidlaw, he organized the Barrie Loan and Savings Company, which was absorbed four years ago by the Dyment Securities, Loan and Savings Company, of which he was president. He was a director of the Collingwood Shipbuilding Company, the Goderich Elevator Company, the Barrie Carriage Company and the Barrie Tanning Company, and was president of the Dyment Foundry Company. He was also interested in ranching in Alberta.

Mr. Dyment was conceded to be an authority on the lumber trade, knowing the business thoroughly from the woods to the counting-room. In his younger days as a salesman of lumber there were few his equal. He was a close observer of life, events and business methods, and although quiet and unassuming, had a most interesting individuality.

Mr. Dyment was much interested in horses, and it was one of the proudest moments of his life when he succeeded in winning the King's Plate in 1903.

In politics Mr. Dyment was a Liberal. He was twice married, his first wife dying six years ago. Two sons—William and Nathaniel—also predeceased him. The surviving sons and daughters are: Mr. Simon Dyment, Barrie; A. E. Dyment, M.P., Toronto; Mrs. T. H. Baker and Mrs. W. E. Wisner, London.

WINNIPEG LUMBERMEN.

Mr. John Arthbunot, whose portrait is here shown, is president of the John Arthbunot Lumber Company, Winnipeg, and the Red Fir Lumber Company, Nanaimo, B.C. His lumbering interests are gradually widening, but notwithstanding this fact, he has been able to give some time to public affairs, being three

MR. JOHN ARBUTHNOT.

times elected mayor of the city of Winnipeg, for the years 1901-2-3.

Mr. D. J. McDonald, western representative and Winnipeg sales manager of the Pigeon River Lumber Company, of Port Arthur, Ont., was born at Appleton, Wis., 1878, and first went into the lumber business with the Gerry Lumber Company of that city, learning the business under Mr. G. M. Miller, then manager of the company. Afterwards he went to Eagle River, Wis., and took charge of the company's plant there. Later he spent two years in the Chicago wholesale lumber market. When the Pigeon River Lumber Company started operations in 1889 at Port Arthur, he went there as bookkeeper and afterwards as assistant manager, removing to Winnipeg four years ago as the company's western representative. He is a shareholder in the Pigeon River Lumber Company as well as the Czerwinski Box Company, of Winnipeg, and partner with Mr. William Scott in the Dominion Lumber & Fuel Company, who have retail yards in Winnipeg. Mr. McDonald is a bright, hustling fellow, well liked and respected in the western lumber field.

Mr. W. T. Creighton, wholesale lumber dealer, Winnipeg, entered the trade in 1885 as salesman for the Minnesota & Ontario Lumber Company, Limited, of Norman,

MR. D. J. MCDONALD.

Ontario, and afterwards was for six years general manager of that company until the amalgamation of lumber interests at Rat Portage in 1893. Since that time he has been engaged in the wholesale jobbing and commission car trade at Winnipeg. In the fall of 1902, in conjunction with Mr. Alex. Black, he organized, for retail purposes, The Alex. Black Lumber Company, Limited, of Winnipeg, operating two large yards on Higgins avenue

MR. W. T. CREIGHTON.

and Erin street, which business has expanded rapidly under generally favorable conditions. Mr. Creighton has been vice-president of the company since its formation.

Mr. J. H. Chambers, of Rydal Bank, Ont., writing to the CANADA LUMBERMAN, says: "We want a Hardwood Association the same as the National in the United States."

THE NEWS

ONTARIO.

Mr. Carew of Lindsay, Ont., has acquired timber lands near Drummond's Bay.

—The Western Planing Mill Company, of Toronto, recently assigned to Mr. W. Gall.

—The lumber business of William Marshall, carried on at Sault Ste. Marie, is advertised for sale.

—The business of Johnson & Company, who operate a planing mill at St. Mary's, is advertised for sale.

—Mr. J. Cameron, who owns a saw mill at Watson Corners, is removing same to Lavant Station.

—The timber slide at Bottle Creek which has been in a very bad condition for some time is being rebuilt.

—Two planing mills will be operated at Kearney this season, one by Nestor Bros. and the other by M. Griffin & Company Company.

—The Muirhead & Mann mill property at Victoria, which adjoins that of J. A. Sayward, was recently purchased by the latter gentleman.

—The planing mill and sash and door factory of the Irvine Lumber & Fuel Company at Brampton, were totally destroyed by fire on January 24th.

—The Diamond Vale Coal and Iron Mines Company, who own about six miles of timber limits on the Coldwater river, will shortly erect a saw mill with a capacity of 15,000 feet per day.

—The Town Council of Almonte recently received a communication from the International Veneer & Lumber Company, of Philadelphia, Pa., asking what inducements the town would offer them to locate there.

—Supplementary letters patent have been issued to the Toronto Junction Lumber Company, Limited, authorizing an increase of their capital stock from $25,000 to $100,000, and also empowering the company to deal in timber licenses and lands.

—The Ontario Government recently granted a charter to Walter Davidson & Company, Limited, Toronto, with power to carry on a general planing mill and lumber business. The board of directors is composed of W. Davidson, Mabel Davidson, and Ann H. Davidson.

—Letters were recently issued to the Continental Timber Company, Limited, with head office at Toronto. The Company are empowered to deal in timber lands, licenses, etc., and the authorized capital is $50,000. J. L. Ross, A. W. Holmstead, and T. A. Silverthorn constitute the board of provisional directors.

The large planing mills and lumber yards of the Wilson Building & Contracting Company, St. Catharines, were destroyed by fire on January 12th. The fire is supposed to have been of incendiary origin, and the loss between $15,000 and $20,000. No insurance whatever was carried on either building or stock.

—The Davis-Smith-Malone, Company, Limited, recently purchased the plant and stock of the Manning Wood Fibre Company, Owen Sound, who became insolvent some months ago. The work of getting out timber for next summer's supplyhas already commenced, and under the management of Mr. Manning, it is believed a profitable business will be established.

—Mr. H. H. Steere, of Windsor, recently patented a device for use in shaping and similar machines which makes it impossible for the operator's hands to be caught by the saw. Mr. Steere has already sold the American patent to Clark & Hart, of Detroit, Mich., for $8,000, while the Canadian rights he keeps himself. This new device is at present giving satisfaction in several planing mills at Windsor.

—A charter under date of January 10th has been granted by the Dominion Government to the Prince Rupert's Timber & Lumber Company, Limited, Ottawa. The concern are authorized to carry on a general lumber business and the capital is fixed at $450,000. The incorporators include W. Anderson, manager, G. H. Rochester and E. H. Moore, lumbermen, W. W. Dyer, merchant, and R.E. McCracken and A. Flett, manufacturers, all of Ottawa.

THE EASTERN PROVINCES.

—The sawmill of A. H. Cummings & Son, Coaticook, Que., was recently destroyed by fire.

—Germain & Mattie, St. Catharine, Fortueuf County, Que., have registered their sawmilling business.

—E. G. Hurtubise has registered the business of the Quebec Spruce Lumber Company, with head office at Ste. Flore, Que.

—J. Beattie and J. McKee, who will carry on a lumber business at Leeds, Que., have registered as Beattie & McKee.

—The lumber business of Merrill & Brown at Charrington, Que., has been registered, A. H. Merrill and S. Brown being the partners.

—F. Millette and F. and J. Cote, of Windsor Mills, Que., have registered their lumber business under the name of Milette & Company.

—J. G. Kirkpatrick recently made additions to his sawmill at Debec, N. B. in the form of a rotary shingle machine and a lath machine.

—Messrs. J. N. Martel and F. H. Martel, who operate a saw mill at Wolfestown, Que., have registered as Joseph Martel & Frere.

—The partnership of Blain & Senecal, saw mill owners, St. Julie, Que., has been registered. The principals are J. Blain and N. Senecal.

—The business of J. L. Dumont & Company, sash and door manufacturers, Montreal, Que., has been registered by J. L. Dumont and O. Daoust.

—At St. Helene De Chester, Que., a lumber business will be carried on by H. Fortier, A. Fortier and D Fortier under the name of Fortier & Freres.

—A. F. Bently and W. B. Bently have formed a partnership, with headquarters at St. Martins, N.B. The name of the firm will be A. F. Bently & Son.

—The lumber business at Hereford, Que., which was carried on by H. H. Clark and R. C. Bartlett under the name of Clark & Bartlett has been registered.

—The Mattawin Lumber Company, of Mattawin, Que, is seeking incorporation from the Quebec Legislature, to carry on a general lumber business.

—Donald Fraser & Sons, Fredericton, N. B., will rebuild their mill at Whitworth, near River du Loup, Que. The capacity will be about 5,000,000 feet per season.

—Mr. Daniel Green's steam saw mill which is situated near Sutton, Que., was completely destroyed by fire recently. Mr. Green had only recently installed a new engine and several new saws.

—It is reported that the Miramichi Lumber Company, of Chatham, are considering the establishment of a large mill at Boieshown, N. B., at a cost of $75,000. They have installed a telephone service in their camps.

—The Algoma Commercial Company, Sault Ste. Marie, Ont., cut in the season of 1906 34,435,604 feet of lumber and 9,537,150 lath. Their mill was operated from February 19 to December 12 without a break, two gangs being employed from May 1st to December 4th.

—Mr. C. M. Sherwood is building a new saw mill at Centreville, Carleton County, N. B., in which he will manufacture long lumber in spruce, birch, maple and hemlock, and will also make shingles and lath. The mill will be first-class, of moderate capacity, and will be put into operation immediately.

—A provincial charter was recently granted J. H. Gignac & Company, Quebec, Que., with power to carry on a general lumber business. The authorized capital of the concern is $200,000, and among the incorporators are: J. H. Gignac, O. A. Gignac, C. Gignac, F. Huot, all of the city of Quebec.

—A Dominion charter was recently granted the Federal Lumber Company, Limited, Montreal, Que. This company will transact a general lumber trade, with an authorized capital of $49,500. Among the incorporators are: J. Mercure, J. A. Ranger, A. R. Ranger, E. Biron, all of Montreal, and J. H. Gareau, of St. Polycarpe, Que.

—At a meeting of the Society of Chemical Industry, held in Montreal recently, Prof. R. F. Rutledge delivered an address on "Destructive Distillation of Sawdust," in which he outlined the results of an experiment which had been made near Ottawa. Several plants are in operation in the State of Michigan making profitable use of sawdust.

—The Fredericton Boom Company, which has handled the logs on the St. John river at Fredericton, N. B., have decided to wind up their affairs and cease business. There is a judgment of $55,000 in favor of the People's Bank against the company, and the shareholders have decided that to meet this they would agree to double liability on their shares. The company are said to have lost considerable on last year's operations.

MANITOBA, SASKATCHEWAN AND ALBERTA.

—The Provincial Lumber Company, Lethbridge, Alta., intend installing a brick plant in the near future.

—James McEwan, lumber dealer, of Arcola, Sask., has sold his business to the Imperial Elevator Company, Limited.

—It is reported that a saw and planing mill is very badly needed at White Whale Lake, the nearest saw mill at present being six miles distant.

—A planing mill at Manor, Sask., the property of Mr. J. L. Wilson, was destroyed by fire about three weeks ago. Estimated loss $1,600.

—Work will be commenced shortly on the erection of a two-storey brick veneer saw mill at Okotoks, Alta., for Imeham Lumber Company.

—Mr. A. B. Tracey, Theodore, Sask., who heretofore conducted a general store and lumber business, has given up the store, and will devote all his time to the lumber business.

—A new lumber firm is being organized to be known as the Rodgers-Cunningham Lumber Company, and will carry on business at Lethbridge, Raymond, McGrath, Stirling and Tabor.

—Mr. Peter McLaren has three logging camps in operation on his timber limits at Blairmore, Alta., and expects, providing the weather keeps favorable, to take out 6,000,000 feet of logs.

—The Sturgeon Lumber Company, of Prince Albert, Sask., have recently purchased a 100 horse power steam engine for use in hauling lumber from their mill to this city, a distance of about 30 miles.

—Mr. James H. Sanderson has sold his saw mill and lumber business at Prince Albert, Sask., to the Prince Albert Lumber Company. The price is said to be about $250,000, and the business will hereafter be under the management of Mr. J. A. Knudson.

—The McCollom Lumber Company, Winnipeg, have moved their offices to the Union Bank building, taking

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the offices formerly occupied by the late Foss Lumber Company, of which Mr. Percy McGillivray was manager. The latter is now associated with the McCollom Lumber Company.

—The G. B. Housser Lumber Company, Mr. William Armstrong and Mr. D. C. McCaig, well-known lumber firms of Portage la Prairie, Man., have amalgamated as the Housser-Armstrong Lumber Company, Limited. The planing mill which was operated by Mr. Armstrong will probably be enlarged and other important improvements made.

—J. Stewart, manufacturer, R. M. Stuart, electrician, R. H. Mainer, accountant, all of Winnipeg, Man., and others, have been incorporated by the Manitoba Government as the Lake Winnipeg Lumber Company, Limited, with head office at Winnipeg. The company will carry on a general lumber trade with an authorized capital of $100,000.

—A disastrous fire recently occurred at the sash and door factory of R. B. Bissett, Strathcona, Alta., when the main building, engine and boiler rooms were totally destroyed, the loss being about $3,000. Mr. Bissett will immediately rebuild that portion of his plant which was destroyed, and fortunately a large consignment of new machinery was in transit when the fire occurred.

BRITISH COLUMBIA.

—The Boundary Lumber Company was recently incorporated by the British Columbia Government with an authorized capital of $200,000.

—The Gray & Macleod Lumber Company, of New Westminster, have dissolved. Mr. T. W. Gray will continue to carry on the business.

The saw mill business of Mr. W. J. Beam, of Vancouver, has been acquired by the Beam Manufacturing Company, Limited, with a capital of $100,000.

—The wholesale lumber firm of Bently & Banning has been dissolved by mutual consent. The business in the future will be carried on by Mr. W. J. Bannister.

—J. H. Lawson, barrister, of Victoria, has been appointed attorney for the Henry Stewart Lumber Company, whose head office is at Marinette, Wis. This company have been licensed to do business in the province of British Columbia.

—A serious fire occurred at New Westminster, when a large portion of the Hadden Shingle Company's plant was destroyed. The loss will be about $5,000, with approximately $3,000 insurance. The dry kiln, boiler house and lumber yard were saved.

—The W. E. Cook Lumber Company have purchased the Kaslo saw mill which was for some time owned by G. O. Buchanan. The plant has been thoroughly overhauled, three new boilers, an engine, dynamo and electric lighting plant having been installed.

—American capitalists are interested in a scheme to erect a large saw mill at Harrison River, in which vicinity they have recently secured valuable timber lands. Before active operations commence, however, the Dominion Government will be asked to make the necessary improvements to the Harrison river in order to make same navigable.

—The Burrard Lumber Company has been reorganized and formed into a joint stock company, to be known as the Burrard Lumber Company, Limited. The company's saw mill on the south shore of the Inlet will be considerably enlarged and the output increased. The officers of the new company are: President, Mr. J. Rogers; Vice-president, Mr. J. P. Nicholls; Secretary, Mr. J. R. Turner; Director, Mr. C. H McCauley.

—The Canadian Pacific Sulphite Pulp Company, Limited, expect to be manufacturing pulp within a year. The company own about 83,000 acres of timber lands in the vicinity of Swanson Bay, B.C., and will develop the necessary power from the waters of the Swanson river. The machinery is already arriving, and the output of the mill at the beginning of operations will be about 50 tons per day. The Company expect to find ample market for their product, and will export principally to Japan.

—The Hastings Shingle Mill, which has been equipped with 18 machines with a capacity of 450,000 shingles per day, is being increased by an addition of ten machines. The plant has been thoroughly overhauled, about $15,000 having been spent, and the capacity will now be about 700,000 shingles per day. The Company intend to spend $80,000 in the erection of a new mill on the site of the old mill burned some years ago. The equipment will consist of a 9-foot log band saw, Pacific Coast edger, band resaw and gang, large log turner, log sizer and other modern machinery. The power will be supplied by three engines giving in all 500 horse power.

—The recent improvements in the Yale Columbia Lumber Company's plant at Material Yard included a shaving exhaust system, probably one of the best of its kind in British Columbia. Heavy twin exhausters are are used, and the shavings are driven a distance of 600 feet to a patent cyclone placed over the boiler house. The shavings, after being separated from the blast, are fed by an automatic valve system direct into four boilers and storage vault. Controlling levers operating from the boiler house floor divert the shavings to all or any boiler as required. The Columbia Blower Company had the contract. This company have the following contracts on hand for exhaust shaving systems: Yale Columbia Lumber Company, Cascade; Kettle River Lumber Company, Grand Forks; Yale Columbia Lumber Company, Nelson; Canada Pacific Timber Company, Gerrard; Bowman Lumber Company, Revelstoke; also for remodelling the plants of the Mundy Lumber Company, Three Valley; and for fans for the Millar Lumber Company, Creston.

PERSONAL.

The death is reported of Mr. D. S. Bird, who operated a saw mill at Cooper, Ont.

Mr. F. W.S. Locke, late Accountant of the McCollom Lumber Company, is now Accountant of the Globe Lumber Company, Winnipeg and Vancouver.

Mr. A. C. Dutton, of John Fenderson & Company, Sayabec, Que., has recovered from his recent attack of typhoid fever, and has again assumed his business duties.

Mr. S. Brannan, a shanty foreman and for many years in the employ of the Pembroke Lumber Company, died in his sixtieth year at his home in Pembroke recently.

Mr. J. Frankford Storey, 20 Laurier avenue, Montreal, has been appointed Quebec and Ontario representative for the Fred S. Morse Lumber Company, of Springfield, Mass.

Mr. A. W. MacKinnon, the Spokane representative of Wm. E. Barrett & Company, wholesale lumber dealers of Chicago, was the Spokane representative of the Kittens at the Hoo-Hoo Concatenation held at Nelson, B. C. Mr. MacKinnon was put through in right royal style by his compatriots of the inland metropolis.

During the holiday season the staff of the Sprague Lumber Company, of Winnipeg, presented Mr. D. E. Sprague, the esteemed president of the company, with a handsome dress suit case in commemoration of the 25th anniversary of the establishment of his lumber business. In responding Mr. Sprague expressed the hope that the same spirit of friendly interest on the part of each officer and member of the staff which had contributed so largely to prosperity in the past, would continue to prevail in the future.

On January 10th there passed away one of the most prominent and highly esteemed citizens of Quebec in the person of Mr. Andrew Thomson. Deceased was the eldest son of the late James Thomson, of Westfield, Que., and was born in November, 1829. When quite young he entered the firm of Thomson & Company, of which his father was the principal. He was for some time in charge of the Buckingham mills, and had the Etchemin mills under lease for a time. Later he entered the firm of G. B. Hall & Company, proprietors of the Montmorency lumber mills. Besides his lumbering interests, he was a moving spirit in many of Quebec's leading enterprises, being one of the principal promoters of the Quebec Light & Power Company, of which he was president at the time of his death. For over 25 years past he has been president of the Union Bank.

HYMENEAL.

An exceedingly pretty wedding was celebrated in the Church of the Redeemer, Toronto, on Wednesday, January 23rd, when Miss Florence Phillips, daughter of Mr. F. J. Phillips, became the wife of Mr. Dwight J. Turner, President of the Turner Lumber Company. The ushers were Mr. Clarence Turner, of Sudbury; Mr. William Comstock, of Alpena, Mich.; Mr. Heber Phillips, and Mr. Eric Armour. Mr. B. R. B. Towsnend of Pittsburg was groomsman. The bride was attended by her three sisters, Miss Eleanor Phillips as Maid of Honour and Misses Flossie and Trixie Phillips as bridesmaids; two little nieces acting as flower girls. The ceremony was performed by the Rev. Charles J. James, after which a reception was held at the home of the bride's parents, 63 Queens Park. Among the relatives present were Mr. and Mrs. Arthur Turne , of New York, and Mr. and Mrs. Stanley Turner, of South River. Mr. and Mrs. Dwight Turner left at 5.20 p. m. for a trip to Florida, and on their return will reside at 106 Madison avenue, Toronto.

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EFFECT OF MOISTURE ON WOOD.

Very little is definitely known about the influence of moisture on the strength of wood, even by those experienced in handling the material. Since the whole subject is one of great importance, the United States Forest Service has been making a thorough study of it during the past three years and is about to publish the results of its investigation in an exhaustive technical bulletin entitled "Effect of Moisture Upon the Strength and Stiffness of Wood."

The chief points presented by the study are:

1. The relation of moisture to strength follows a definite law which can be graphically expressed. Proper drying very greatly increases the strength of all kinds of wood, the amount of increase in strength depending upon the species and the dryness. The increased strength given to green wood by thoroughly drying it is so great that it will surprise many. For example, the strength of a piece of unseasoned red spruce may be increased over 400 per cent. by a thorough drying at the temperature of boiling water. Strength decreases again, however, as the wood re-absorbs moisture. Air-dried wood, protected from the weather, and containing 12 per cent. of moisture, is from 1.7 to 2.4 times stronger than when green, varying with the species. Stiffness is also increased by drying. These conclusions, however, are drawn from small-sized pieces not exceeding 4 by 4 inches in cross-section such as are used in vehicle work, tools, etc. Large timbers require years of drying before the moisture is reduced to the point where strength begins to increase. It must also be taken into consideration that more or less checking always occurs when large timbers dry; and if this checking is excessive it may cause weakness to counterbalance, partially or entirely, the strength gained in drying. Consequently it is not safe to assume that the average strength of large so-called seasoned timbers is much greater than that of green or wet ones.

2. The fibre saturation point of a number of species has been determined. This point, which varies with conditions and species of wood, designates the percentage of water which will saturate the fibres of the wood. It has been found that, under normal conditions, wood fibre will absorb a definite amount of moisture; beyond this the water simply fills the pores of the wood like honey in honey-comb. Only that water which permeates the wood fibre has an influence upon the strength. For the following species, the saturation point occurs at the given percentage of moisture based on the dry weight of the wood:

	Moisture.
Longleaf pine	31 p.c.
Red spruce	25 p.c.
Chestnut	24 p.c.
Loblolly pine sapwood	25 p.c.
Red gum	23 p.c.
Red fir	20.5 p.c.
White ash	30 p.c.
Norway pine	30 p.c.
Western tamarack	25 p.c.

3. Prolonged soaking in cold water does not reduce the strength of green wood below that of its fibre saturation point, provided it remains in perfect condition. When wood has been dried and is re-soaked, it becomes slightly weaker than when green.

4. Wood soaked in heated water absorbs more moisture because the amount of water which the fibre will contain is increased. This causes a reduction in strength and stiffness, as in wood that is heated or steamed for bending.

LUMBER LAW.

J. D. Brown, of Gravenhurst, Ont., was located under the Free Grants Act on a certain lot in the Township of Wood, Muskoka, but R. H. Graham and one Powers, who owned timber on adjoining lands, entered upon Brown's lot and cut 30 acres of valuable hemlock timber, which was being preserved. The timber was cut into sawlogs and put on skids before Brown was aware of it. He applied before Chief Justice Meredith, and obtained an injunction restraining the removal of the timber until trial of the action, which Brown has brought against the defendants for damages.

IMPROVEMENT IN LUMBER DRYING.

A Grand Rapids, Mich., wood-working concern of unquestioned standing claims that because of a recent discovery which for the present at least is a secret, it is enabled to dry twice as much lumber in an ordinary drykiln as has been heretofore dried, and do it better. It is claimed for the new process that, instead of the lumber coming out hard and flinty with a kink in the board at every knot and twists, checks in the ends of the board, solid oak inch lumber now comes out flat and straight, and as soft as ash, with every particle of tannic acid and moisture thoroughly extracted, and the stains and discolorations so prevalent by the old system entirely obliterated. This not only adds greatly to the value of the lumber by minimizing the waste, but adds much to the life of the knives, cutters and saws, and saves much time and expense in keeping the cutters in order. It is further stated that the concern referred to has been enabled to dispense with the services of several men in its cutting-up department and to throw out two of the three buzz planers used before. The method has been in use about a year and has attracted the attention of superintendents and managers of planing mills and furniture factories in other cities.

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DECIDE TO BUILD BIG MACHINE WORKS.

The Schaake Machine Works Company at New Westminster, B.C., have now acquired the whole of the frontage on Front street, from the Harvey building to the Brackman-Kerr Company's mill, and have already commenced erecting the first section of a complete section of new buildings. The total frontage will be 462 feet, and the buildings will go back the full 66 feet to the rear of the lots. The bank at the rear of the buildings will be held back by means of a cement retaining wall, which will run the entire length of the lots. Numbering from the west end, where the work of construction has already commenced, there will be first the general business offices and pattern rooms, then a yard; adjoining the yard will be a foundry, machine shops and blacksmithing department. Into the latter the C. P. R. has agreed to run a spur, so that all loading of machinery can be done without carrying it outside the building. The height of the frontage of the building will be 36 feet, and light will be supplied at the front by means of seventy large windows and by the upper windows in the rear. The foundations of the structures will be of concrete and the roofs of corrugated iron.

The interior of the buildings will be fitted up with all the modern improvements along the line of machinery known to the trade. Electrical power will be used for its operation, and will be supplied by three high power motors. If satisfactory arrangements can be made with the British Columbia Electric Company, it is altogether likely that the power required for operating will be secured from them. If not, the company are prepared to put in their own engines and generate their own power.

The entire shops will be covered by an electric crane, which will travel on a running track from one end of the building to the other. It will have a thirty foot span, and will be capable of lifting six tons and depositing wherever required. The material to be lifted will be raised above the working machinery and moved without interfering with the work of the shop. The crane will also run through the yard.

A private telephone system will connect all departments with the business office, and other devices of a labor-saving character will figure in the equipment.

In the foundry, which department now has a capacity of three tons, another cupola will be added with a capacity of six tons, which will enable the company to turn out nine tons of castings per day.

On the water front the company holds 198 feet. There they propose building a wharf for the convenience of vessels, and also a building which will be utilized for a gasoline engine and marine works. All the buildings will be heated by steam, and will be fitted out with all conveniencies, lavatories, cloakrooms, etc.

At the present time the company have in their local employ 75 men, and there is already sufficient work in sight to demand the increase of the staff, as soon as the facilities for working are installed, to from 150 to 200.

The buildings are to be erected in such a manner that the work of the mechanical department will not be delayed for an hour. Work has already commenced on the office and pattern shops, and as soon as they are ready they will be put into use. The work on the blacksmith department will follow, and as the building grows it will be equipped and utilized. It is expected that by July the plant, fully equipped, will be in full running order.

At Seattle the company have a branch of the works, where they are building saw and shingle mill machinery. There they contemplate increasing their capacity also, and putting in a section for the manufacture of the Cowie engines.

The shareholders of the company held their annual meeting on November 30th last. Mr. Schaake, the general manager, produced a statement to his shareholders of the past year's work, which proved to be very satisfactory. The balance sheets showed a large profit for the year, and a dividend was declared of 8 per cent. on the issued capital stock of the company, the balance of profits being left in the treasury for the purpose of increasing the company's plant. A motion was passed to increase the capital stock of the company to a hundred and fifty thousand dollars for the purpose of enlargement. The manager said the increase of work was so great that it was impossible to complete the orders on hand without increasing the plant.

The following directors were elected for the present year: A. Ewen, James White, E. J. Fader, H. Schaake and H. Ryall.

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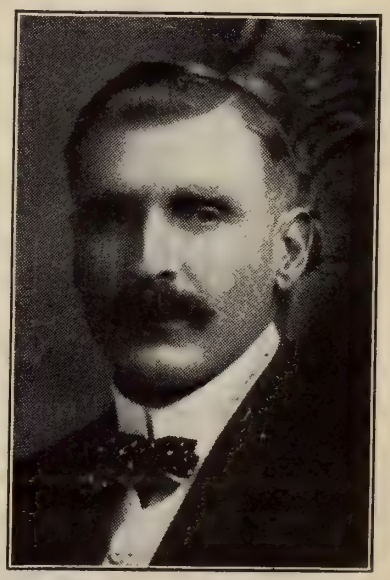
We have for sale the following Boilers, Engines and Mill Machinery:
1 complete Saw Mill Outfit—Boiler, Engine, Saw Frame, Carriage, Saws, Edger, Shingle Machine, Shafting, Pulleys. Snap.
1 Tubular Boiler 40" x 12 ft. (rebuilt).
1 25 H.P. Automatic High Speed Engine (rebuilt).
1 small Tubular Boiler.
1 Smokestack, 18" by 40 ft.
1 " 22" by 45 ft.
Block Lathes for turning Maple Blocks.
Saw Mill Machinery, Smokestacks, Shaft Hangers, Pulleys, Heavy Waggons and Sleighs built to order.
Mill and Machine repair work our specialty.

R. SPENCE & CO.
Beech File Works.
HAMILTON, ONT.
FILE AND RASP MANUFACTURERS AND RE-CUTTERS
A trial order solicited. Write for price list and terms.
C. P. MOORE, PROPRIETOR.



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Limited
OTTAWA, - ONT.

Wholesale Lumber, Etc.
We Manufactnre 18 in. White Cedar Shingles
CEDAR RAILWAY TIES
We have several cars each 25 and 30 ft. 6" top Cedar Poles for early Spring shipment.

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QUEEN CITY OIL CO. LIMITED
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HIGHEST GRADES OF
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THE HAMILTON BRAZING COMPOUND
The only preparative on the market that when mixed with machine oil will insure a perfect braze, and a braze that will last three times as long as made in the ordinary way. No worry, no trouble. When once made it is there to be relied on.
For prices, etc., address,
CHAS. E. HAMILTON & CO.
NORWOOD, WINNIPEG, MAN.

B. C. LUMBER AND SHINGLE ASSOCIATION ANNUAL.

The annual meeting of the British Columbia Lumber and Shingle Manufacturers' Association, was held in their new quarters in the Crowe and Wilson Building Seymour, street, Vancouver, on Thursday, January 10th.

The following officers were elected for the ensuing year:

President, Mr. John Hendry, Vancouver.

First Vice-President, H. De Pencier, Barnet, B. C.

Second Vice-President, E. J. Palmer, Chemainus, B. C.

Third Vice-President, L. A. Lewis, Sapperton, B. C.

Mr. R. H. H. Alexander is the permanent Secretary of the Association.

All of the above named gentlemen served last year, and were re-elected to office this year.

Mr. J. W. Hackett, of Vancouver, was elected Chairman of the Lumber Branch, and Mr. J. D. Woods, Chairman of the Shingle Branch.

The secretary's report for the year, showed that all the committee work of the past year had been faithfully attended to, and that the Association had been very prosperous. The membership increased forty per cent. during the year.

MASON, GORDON & CO.

The business of Mason, Gordon & Co., was founded in the year 1895 by Philip D. Gordon, one of the members of the present firm, under the name of P. D. Gordon & Co., as a general wholesale lumber brokerage and commission business.

In the year 1900 Mr. Gordon was joined in partnership by William T. Mason, for some years partner and manager of the old lumber firm of William Mason & Sons, and since that time their business has increased until they, to-day, rank among the large wholesale lumber firms of the Dominion, and probably one of the largest handlers of dimension timber, of which they make a specialty.

They import largely of yellow Pine from Georgia, Mississippi and other Yellow Pine producing States, and of Oak from Kentucky and West Virginia.

They are also probably the largest individual purchasers of timber in British Columbia, in fact their Fir timber business has developed to such an extent on the Pacific Coast this year, that they found themselves compelled to open an office in Vancouver, B. C., which they have done at 615 Hastings St., West, and installed Mr. Ivan D. Smith, of their Montreal staff, as their representative for the purchase of timber and lumber alone.

In their advertisement is the picture of the largest sawed timber ever brought to Eastern Canade; the sticks being of Oregon Pine and are 42" x 42" x 60 ft. They also brought three sticks 36" x 36" x 82 ft.; these latter being the longest sawed sticks of such dimensions ever brought East, although they have brought timber of smaller sizes up to 99 ft. in length.

Not only do they handle large quantities of timber from these far off points, but they also handle native woods in very large amounts, such as pine, hemlock, spruce and cedar timber, posts and poles.

They also sell lumber of all kinds, as well as shingles, lath, &c.

They make a specialty of handling timber such as is used in railroad construction, and in large canal, dock, and other public works.

The office of this firm is at 60 St. Francois-Xavier St., Montreal, Que.

On December 26th, Mr. R. Jack, a lumberman, was struck by a train at Wabigoon, Ont., and killed.

The Dyment Foundry Company, manufacturers of saw and shingle mill machinery, gasoline engines, etc., Barrie, Ont., advise us that they have decided not to rebuild their plant which was destroyed by fire a few months ago.

The Montreal premises of the Dodge Manufacturing Company, at 419 St. James street, which was partially damaged by fire are being put into shape again for occupation in March. Meanwhile the company have taken the premises at 366-368 St. James street, with complete new stocks from the Toronto works, and are in good shape for business as usual.

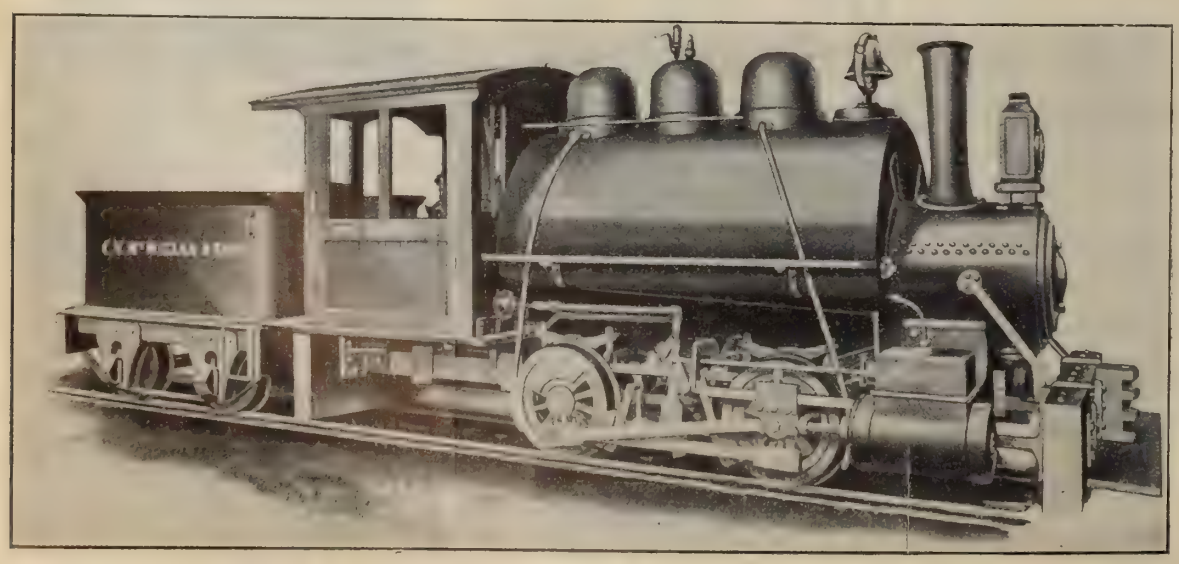
IF YOU ARE HAVING FIRE INSURANCE TROUBLES, CONSULT THE LUMBERMEN'S SPECIALIZING INSURANCE COMPANY.

Lumber and Woodworking Risks Exclusively.

LUMBER INSURANCE COMPANY OF NEW YORK

CAPITAL AND SURPLUS $300,000 PAID IN

Canadian Representative: **E. D. HARDY, 11 Central Chambers, Ottawa, Canada**



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The Ideal

LOGGING LOCOMOTIVE

MANY TYPES ANY GUAGE
ALL SIZES PROMPT SHIPMENT

The **DAVENPORT** is designed for service under all practical conditions, and will do the work of a general engine on any grade up to 6 per cent.

SEND US YOUR ENQUIRIES

United Steel and Equipment Co.

NORTHWEST REPRESENTATIVES:
SEATTLE, WASH. - PORTLAND, ORE.

The Morton Dry Kiln Company, 218 La Salle street, Chicago, Ill., announce that they have made arrangements for the manufacture of the largest part of their dry kiln equipment in the Provinces, so as to eliminate the necessity of Canadian customers paying custom duties on such equipment. The Morton Kilns previous to January 1st, 1906, were manufactured and sold by the A. H. Andrews Company, of Chicago, but the forepart of last year the Morton Dry Kiln Company was incorporated, and now controls all the Morton patents and exclusive rights to manufacture and sell the Morton Kiln. Mr. H. J. Morton, who has spent the best part of his lifetime in the design and manufacture of dry kilns, is president of the company. The Morton Kiln is based on the moist air principle of drying lumber, which is claimed to be the only proper seasoning of the different commercial woods on the market. Among some of the sales of Morton Kilns to Canadian firms might be mentioned the Canadian Pacific Railway Company, who have eight Morton Kilns in operation at their Montreal car shops and two Morton Kilns at their shops in Winnipeg. The Canada Car Company, of Montreal, are also operating four Morton Kilns, and the Mason & Risch Piano Company, of Toronto, have two Morton Kilns in operation. The company will take pleasure in mailing their catalogue "I" to prospective customers upon request.

P. PAYETTE & CO.

Manufacturers of Saw Mill and Engine Machinery and all kinds of Marine Machinery.

PENETANGUISHENE, ONT.

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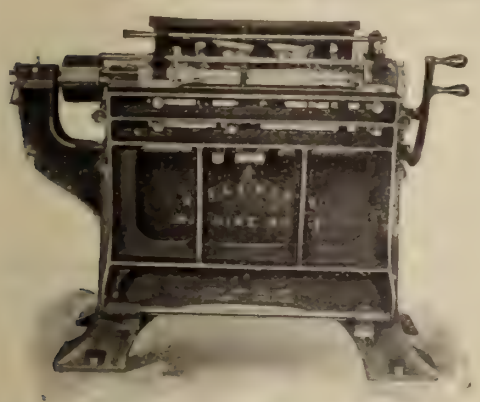
OFFICE AND WORKS CHICAGO ILL NEWARK N.J MANCHESTER ENGLAND DUSSELDORF GER APPLETON WIS

HAMILTON, ONT.

You Can Save Money Turning Balusters

Besides Making More of Them and Much Better Ones



If You Will Use

Our No. 2 Baluster Machine

Turns Balusters, Spindles, Table Legs, any pattern, hard or soft wood, 1,000 pieces daily. Does perfect work at less cost than by hand. Stock is held in chucks, instead of between centres, avoiding all vibration. If you make balusters you should investigate carefully.

May we send samples of work and detailed description?

C. Mattison Machine Works, Beloit, Wis.

871 FIFTH STREET

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J. COHEN & CO., Montreal

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Seamless Brand Mackinaw

Registered

Sewn with Linen Thread.

Made for

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LOT .....

SIZE .....

PRICE.....

Look for this LABEL in all

SEAMLESS BRAND MACKINAW COATS

W. L. HASKELL, Manager.
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RAIL AND WATER SHIPMENT.

Haskell Lumber Company, Ltd.

Manufacturers Canadian Lumber

Fassett, Que.

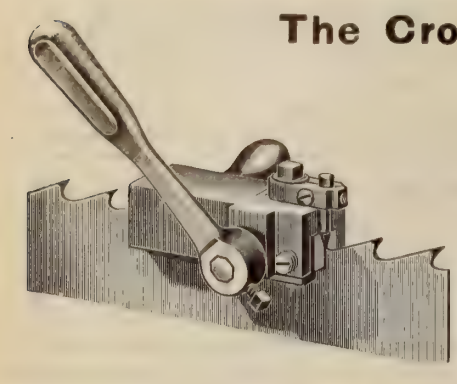
Band Sawed Hemlock, Spruce, Pine, Basswood, Birch, Oak, Butternut, Maple, Cedar and Ash Lumber, Lath and Shingles

SPECIALTIES: **Hemlock, Spruce and Pine Timbers**

We own and operate the Salmon River & Northern Railway, which delivers our logs direct to mill [no logs being floated] and enables us to furnish special length timbers promptly at any time of year.

Saw Mills and Planing Mills located on C. P. R and Ottawa River 70 miles west of Montreal

The Crowell Swage Shaper



No. 1—Weight, 3 lbs. For saws 16 gauge and thinner.

No. 2—Weight, 5 lbs. For 14 gauge and thicker, or heavy mill saws.

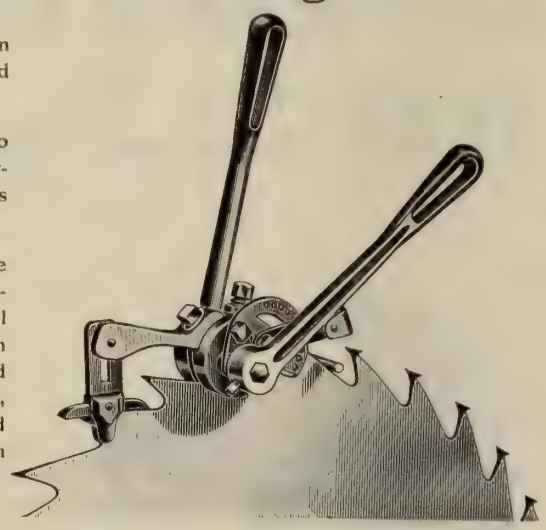
This cut shows our pressure side dress. It is different in design from others. It is simple, handy to operate and makes a uniform point to saw teeth. The die presses both sides of the tooth at once. All up-to-date filers recognize the advantages derived from the use of a Swage Shaper, and they can be used on circular saws.

Circular Saw Swage

This Swage can be used on Band Saws by simply using Band Saw Front Guard.

The way to economize is to buy a Crowell Swage. Can furnish with Bench Rest or same as shown in cut.

There are thousands of these Swages in use in Saw and Planing Mills, Sash, Door, Wheel and Furniture Factories, Pattern Shops, Novelty Works, Stave and Heading Mills, Box Factories, Car Shops, Locomotive and Veneer Works, Piano and Organ Factories.



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White Pine, Red Pine, Spruce, Tamarac, Hemlock, Ash, Elm, Basswood.

Lath.

Cedar Timber, Lumber and Railway Ties, and 18-inch Cedar Shingles.

THE BURDEN OF OLD AGE

You can lighten this burden to a very great extent by taking an Endowment Policy in the Confederation Life.

Such a policy will provide money for yourself in your old age, and will in the meantime furnish the much-needed insurance protection for your family.

Full information as to the terms upon which you can procure an Endowment Policy are contained in the Company's literature, and will be gladly sent upon request.

Write to the Head Office or to any of the Company's agents, giving your age, when all information will be immediately furnished to you.

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Store Fronts, Verandahs, Posts and Balusters, Pulpits, Doors, Stair Work, Altars, Church Windows, Pews, Windows,

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Capacity of Kiln, Two Hundred Thousand.

Are You Buying

Neptune Water-Proof Leather Belting?

IF NOT, WHY NOT?

You cannot afford to overlook this grade of belting.
Ask your neighbors what they think of it—they are using it.

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RED CEDAR SHINGLES

Lake Winnipeg and Rainy River Spruce and Pine Lumber, Pine and Spruce Logs, Cedar Poles and Fence Posts.

Timber Lands. Piling and Mining Props. Farm Lands.

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Large Centrifugal Pump and Pulsometer, in first-class condition, complete with foot-valve and hose; no reasonable offer refused.

Screw Cutting Lathe, 10 ft. bed, 16" swing, very little used; in fine condition, a chance to secure good modern Lathe at a bargain.

Also large Drill and Slotter, 24" Swing, in first-class condition.

Self-oiling Peerless Engine, 75 h.p., also smaller sizes of different makes, Boilers, all sizes, tested and guaranteed.

Our stock is changing continually; the up-to-date Second Hand Machinery House of Montreal.

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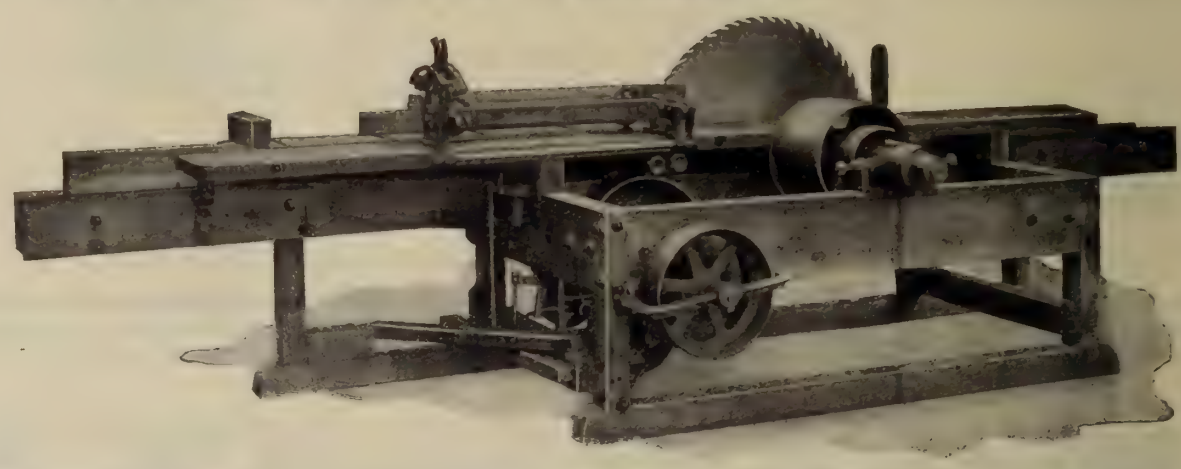
Timber and Lumber Dealers

A SPECIALTY IN

Long Timbers, both Pine, Soft Wood and Hardwood

We have well-equipped Planing Mills and can supply all kinds of Mouldings, Matched Lumber and Floorings, Hardwood Whiffletrees, Verandah Posts, Etc.

SPOOL WOOD MACHINE ("RICKER")



This machine has been designed to cut logs of all lengths up to 6' and of all widths, from 3/8" to 4" thick, into boards for different uses such as Spool Wood, Cheese Box Headings, Railings, etc., etc., with rapidity, and, by raising the board guide, a 14" log can easily be cut in two.

The mechanism for operating the carriage is so constructed that the operation is made by two pedals, giving the advantage to the operator of using both hands to handle the logs, boards, etc.

The saw guide is so constructed and fixed that the saws can be changed easily and rapidly.

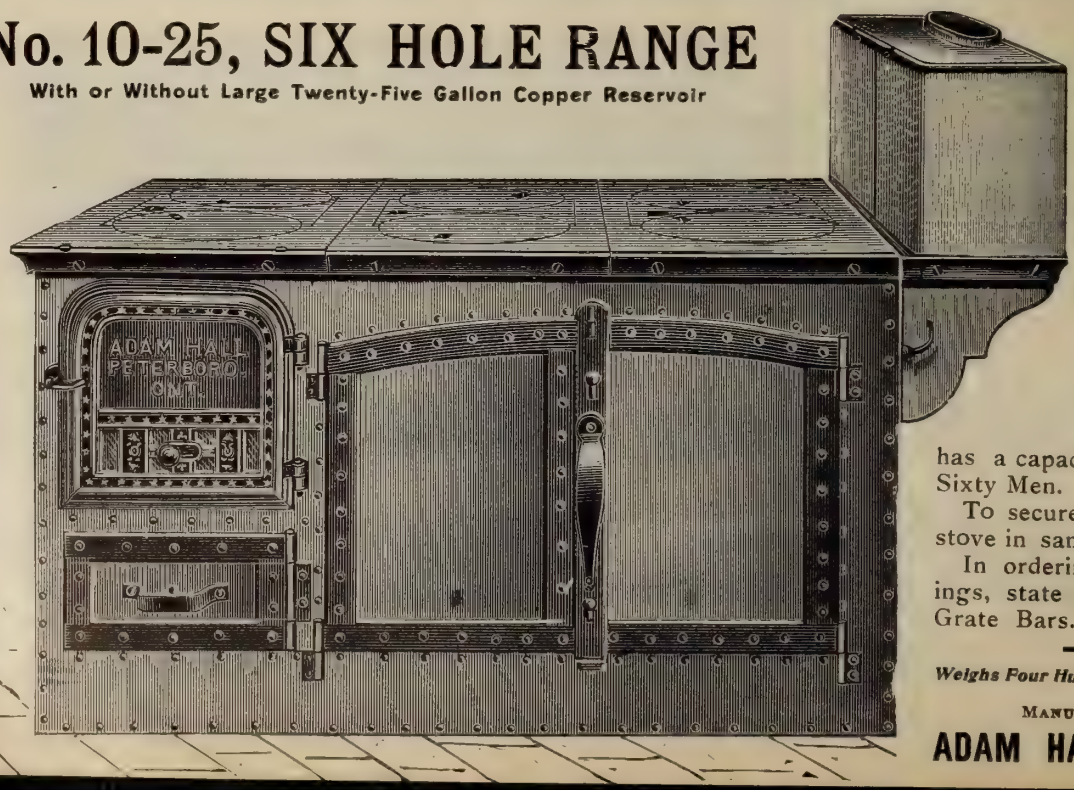
The setting of this guide can also be done easily and the process is out of all danger.

The driving pulley is 14½" x 12½" face and makes 1,200 revolutions per minute, and, by means of cones, the carriage runs forward at two different speeds—62' and 112', and backwards 330' per minute.

This machine is the most up to date of its kind.

THE SAVOIE-CUAY COMPANY - Makers of Saw Mill Machinery **PLESSISVILLE STATION, P.Q.**

No. 10-25, SIX HOLE RANGE
With or Without Large Twenty-Five Gallon Copper Reservoir



Size of Top, 54 inches by 30 inches; Size of Oven, 24 inches wide, 28 inches deep and 16 inches high; Fire Box, 28 inches, —Wood.

This Range has the large Copper Reservoir and gives the full use of the top for Boiling purposes. It has a capacity to cook for Sixty Men.

To secure best results set stove in sand box.

In ordering Fire Box Linings, state if long or short Grate Bars.

Weighs Four Hundred and Fifty pounds

MANUFACTURED BY
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We Still Head the Procession of 1907

NEW BRUNSWICK FOUNDRY AND MACHINE SHOPS

FREDERICTON, N. B.

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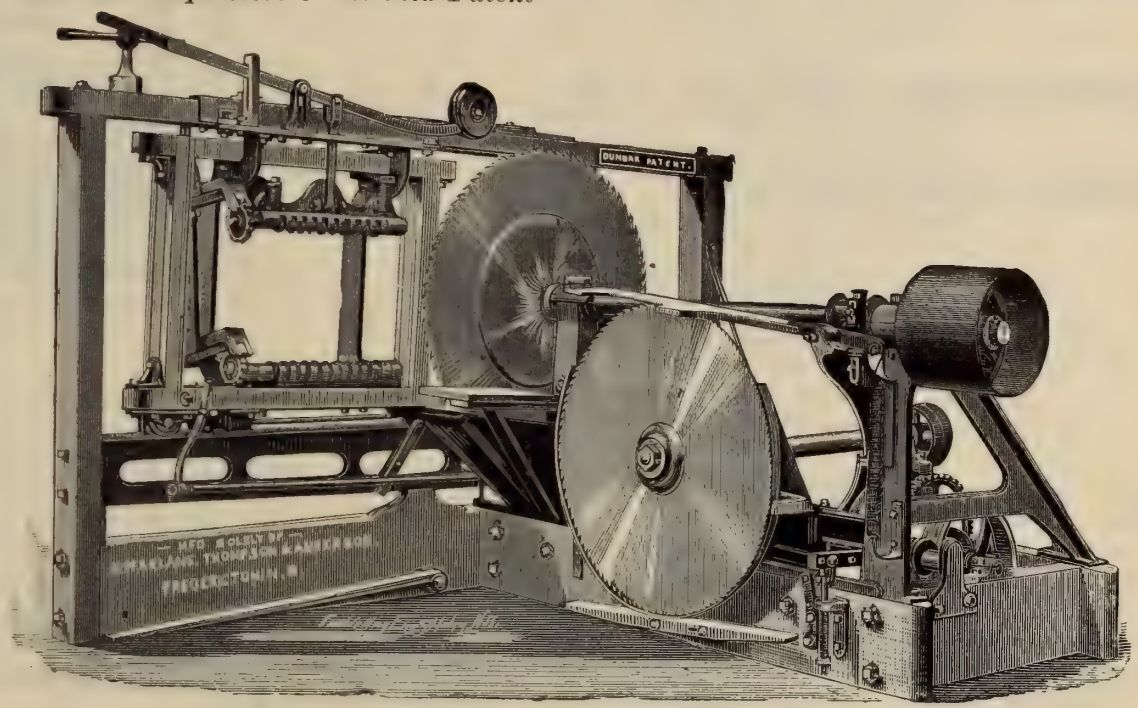
Manufacturers of the only original

PATENTED DUNBAR SHINGLE MACHINE

And Sole Proprietors o the said Patent

Universally admitted as being the best machine on the market from the Atlantic to the Pacific

Better than Ever as Constructed for 1907, having ring oilers on journals and other valuable improvements



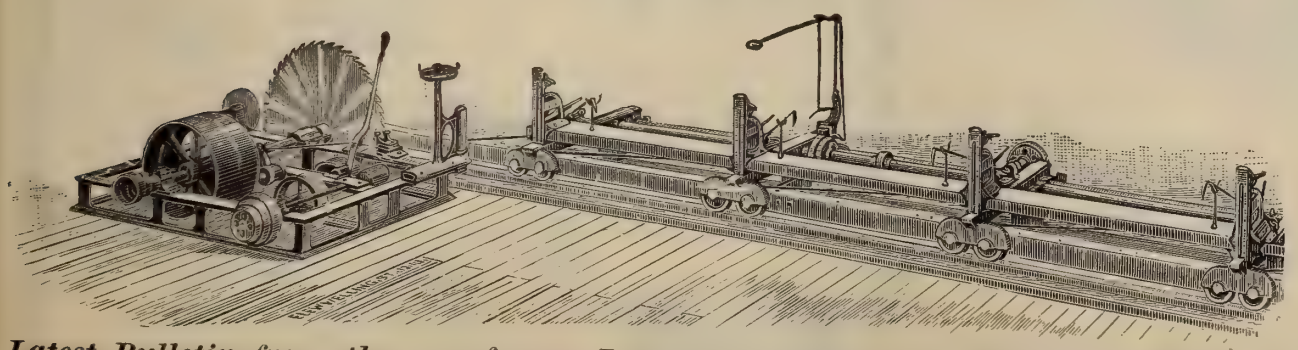
PATENT DUNBAR SHINGLE MACHINE.

The following well known firms are a few of the many who are using the Celebrated Dunbar Shingle Machine :—Metis Lumber Co., Quebec, 15 machines ; John A. Morrison, Fredericton, N.B., 10 machines ; Gibson R'y. & Manufacturing Co., Marysville, N.B., 10 machines ; Hastings Shingle Manufacturing Co., Vancouver, B.C., 16 machines, and hundreds of others from one to five machines.

The McFarlane, Thompson & Anderson Mfg. Co., Ltd., Dunbar Shingle Machine is a record-breaker in the west—(New Whatcom Blade, Washington State). The following may be of interest to mill operators and others ; it is, we believe, the best six day record ever made on this class of machine—a Dunbar upright ; the bolts were taken as they came from the woods, without selection, and were a good average quality. This remarkable run was accomplished recently at the George A. Cooper mill, Chuckanut Siding : Total cut for six days, 2 shifts of ten hours each per day, 394,000 eighteen inch shingles. In the day shift, Harry A. Edison, sawyer, cut 218,000, an average cut of 36½ thousand, and the night shift, Levi Loop, sawyer, cut 176,000, an average of 29⅓ thousand of eighteen inch shingles per day.

"When all the rest fail, or are down for repairs, or are cutting shims, the McFarlane, Thompson and Anderson Mfg. Co. DUNBAR SHINGLE MACHINE is still cutting the standard shingle of the world." From the Atlantic to the Pacific they all say it.

Have sold more in 1906 than 1905 and orders for 1907 still gives evidence of increasing. People who know, won't have any but our Shingle Machine



Latest Bulletin from the sea of war—From the Metis Lumber Co., Price, P. Q., in reference to the 15 machines sold them :

"Replying to your enquiry as to the running of the shingle machines you sold us, would say that they have given entire satisfaction, and have run very successfully so far. We have sawn 30 million shingles in

We manufacture a complete line of IMPROVED ROTARY SAW MILLS, GANG EDGERS, LATH MACHINES, BUCKEYE AUTOMATIC CUT-OFF ENGINES and all kinds of MILL MACHINERY.

Our prices are right.

Kindly allow us to quote before purchasing elsewhere.

For further particulars address

McFarlane, Thompson & Anderson

JOHNSON'S VETERINARY REMEDIES

Are Still the Leaders with the Lumbermen of Canada . . .

They consist of :—

JOHNSON'S VETERINARY HEALING OINTMENT AND GALL CURE.

Put up in ¼ lb. and 2 lb. tins. The best all-round healing ointment on the market. It cures galls, wounds, scratches, corks, cut, sore-shoulders, etc., etc. It is cleansing, antiseptic, healing and drying. Sample mailed on request. **Regular 2 lb. tins, $2.25 each.**

JOHNSON'S HORSE LINIMENT NO. 1 [Alcoholic]

Put up in 1 gall. jugs, $3.00 per gallon. The cheapest and most effectual liniment on the market, can be applied wherever the use of a liniment is indicated.

JOHNSON'S HORSE LINIMENT NO. 2 [Oils]

Put up in 1 gall. jugs, $3.00 per gallon. This is a most useful liniment, but lacks the penetrating qualities of the No. 1.

JOHNSON'S HORSE COLIC REMEDY

Put up in 1 gall. jugs, $5.00 per gallon. This is a sure and speedy also a safe cure for colic in Horses or Cattle.

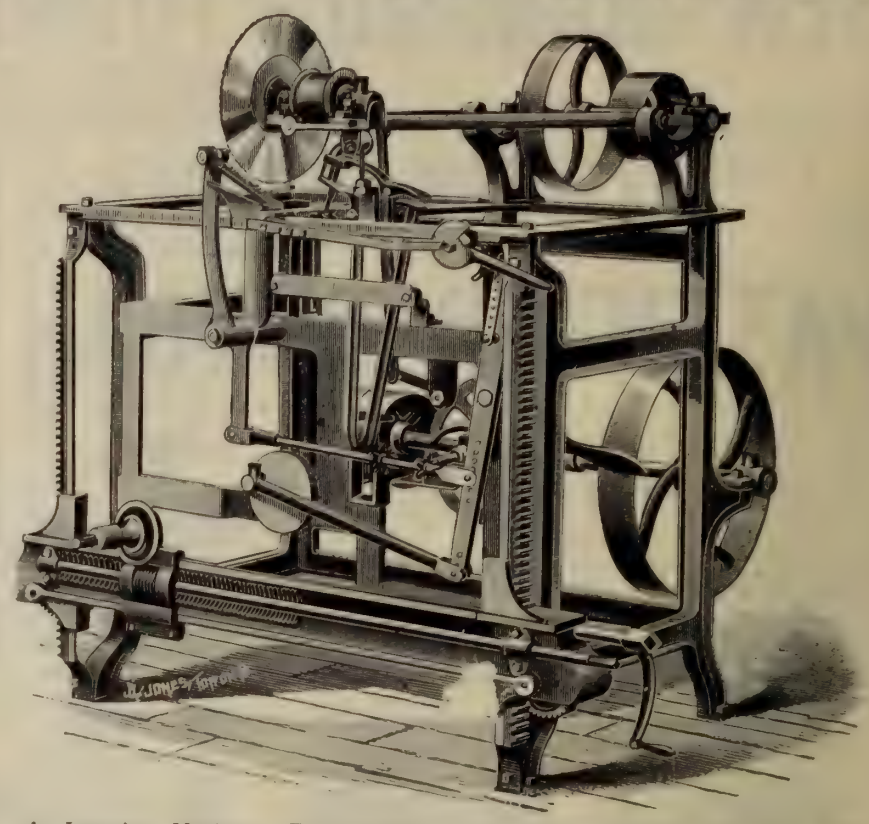
These goods being put up in bulk are much cheaper than any other lines, the cost of bottles, boxes, cartons and of bottling and boxing being saved. A full line of all kinds of medicines for the stable and camp vans always on hand at lowest possible prices. Write for list. 10% Trade Discount off all orders amounting to $50.00 and upwards.

Compare prices with those you have been paying.

Correspondence Solicited.

A. H. JOHNSON,
Wholesale Druggist,
COLLINGWOOD, ONT.

AUTOMATIC SAW SHARPENER



An Ingenious Machine; Easily handled and adjusted; perfectly automatic, and solidly built. The operator can give the saw teeth any shape desired, and without attention, other than to adjust and start it. The machine gives the saw perfectly shaped and uniform teeth. The Circular Saw Size is especially designed for large saws, but it can be arranged for shingle saws as well if required.

We Manufacture **Saw and Shingle Mill Machinery, Carriages, Saw Frames Edgers, Trimmers, Pneumatic Buffers, Lath Machines, Bolters, Shingle Machines, Jointers, etc.** Write to us for our Catalogue.

Mowry & Sons, - Gravenhurst, Ont.

HOE BITS and SHANKS

OLDHAM BAND SAWS

HANCHETT SWAGES

FILE ROOM SUPPLIES

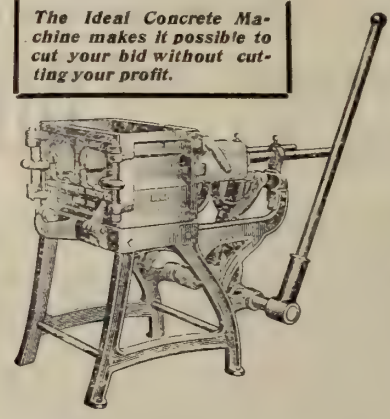
THE A. J. BURTON SAW COMPANY, LIMITED
VANCOUVER, B. C.

Manufacturers of

INSERTED TOOTH and all Solid Tooth Circular **SAWS**

TO MAKE THE WINNING BID

The Ideal Concrete Machine makes it possible to cut your bid without cutting your profit.



It is impossible to underbid the contractor who manufactures his own Ideal Concrete Building Blocks with an Ideal Concrete Machine.

The marvelous simplicity and rapidity of the Ideal Machine makes it possible to produce Ideal Concrete Blocks at a cost that makes the lowest bid a profitable one. May be successfully operated by any one without previous experience or other assistance.

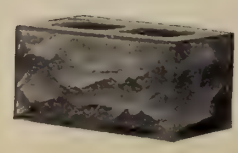
Ideal Blocks are adapted to any possible architectural design, and excel all other materials in fire and weather-proof qualities.

IDEAL CONCRETE MACHINERY

Embodies the only principle (face down) permitting the use of rich facing material with less expensive material in back of blocks. Adaptable to the manufacture of five different systems of blocks—Hollow, Solid, Veneer, Two-piece, and Continuous, in various shapes and sizes. The same machine makes countless designs of face, and natural stone effect. (See Illustration).

Practically everlasting. Not a chain, spring, wheel or cog in its construction.

Calalogue and valuable facts for builders free on application.



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LONDON — — ONTARIO

MUSSENS LIMITED
Montreal, — Canada
SOLE AGENTS FOR CANADA

Fraser & Co.

Lumber Merchants

OFFICE, 74 NEPEAN STREET.

Ottawa, Canada, Dec. 14, 1906. 190

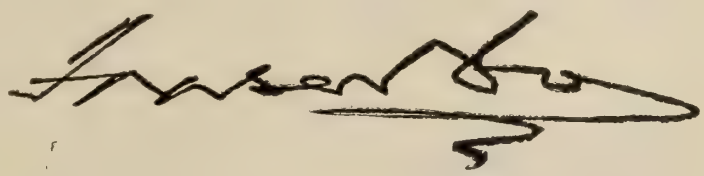
The Lumber Insurance Company of New York
66 Broadway
New York, N. Y.

Dear Sirs,—

We acknowledge with thanks receipt of funds in satisfactory settlement of our loss, as covered by your policies in the fire which recently occurred in our lumber yard at Deschenes, Que.

We also appreciated the interest you took in the course of the adjustment, as evinced by your letter received during its progress.

Yours truly



[NOTE : The above is a copy of letter received from one of the first Canadian lumber concerns which placed their full line (about $65,000) with us after we became regularly licensed in Canada last fall. Their yard at Deschenes, Quebec (about seven miles from Ottawa) suffered a fire on October 3rd. The amount paid under our policies was $37,220.76.]

Lumber Insurance Company of New York, 66 Broadway, New York, N. Y.

Canadian Representative, E. D. Hardy, 11 Central Chambers, Ottawa

FOR SALE

1—250 H. P. Slide Valve Engine, 18 in. x 36 in. Cylinder, with new Nordinburg cut-off Governor; one rope pulley 8 ft. diameter, grooved for 18–1 in. ropes, the driven pulley is 40 in. dia., fly wheel 12 ft. dia.; also one Tubular Hot Water Heater.
1—Large Double Edger with 6 saws.
1—Saw Edger.
1—2-Saw Trimmer.
1—Saw Trimmer.
1—Twin Circular Saw Rig, with six Saws, Prescott Gun-Shot Steam Feed, cylinder 7 in. dia. 38 ft. 6 in. long, Carriage and Set Works complete.
1—Large Burner, 35 ft. dia., 80 ft. high, with Spark Arrester, Balcony and Ladder, Grate Bars, Bearing Bars, etc., all complete.
Shafting from 2 in. to 8 in. dia. with boxes and couplings.
Pulleys from 6 in. to 9 ft. dia.
Mitre and Bevel Gearing, wood and iron.
Paper and Iron Frictions, Bevel, Mitre or Straight Face.
Sawdust and Refuse Conveonrs and Carriers.
1—32 in. x 48 in. High Pressure Engine made by J. McDougall, Caledonian Iron Works, Montreal, with Nordenburg Automatic Cut-oft Governor. Moffat Hot Water Heater, made by Goldie & McCulloch, Galt, Ont. 14 in. x 11 ft. Crank Shaft. 9 ft. x 14 in. Mortice Gear with 85 teeth. 4 ft. 6 in. x 14 in. pinion with 43 teeth.
7—54 in. x 13 ft. 6 in. Boilers, 46 4 in. Tubes, full fronts, Grates, Fire Brick Lined Furnaces, Smoke Boxes, Blow-Off, Globe and Safety Valves, Steam and Glass Water Gauges, and Try Cocks complete.
4—36 in. x 11 ft. Boilers, 22 3-in. tubes, fronts and smoke boxes.
3—36 in. x 15 ft. Dutch Oven Boilers, 38 3-in. tubes, half fronts, smoke boxes and boiler plate breechings, part fittings.
1—8 ft. Band Saw Mill, made by Phoenix Mfg. Co., Eau Claire, Wis. Complete and in fine condition.
1—Twin Circular, with Carriage, Head Block, and Prescott Gunshot Steam Feed. Made by William Hamilton Co.
1—3 Head Block Saw Carriage, with double acting ratchet Set Works, Power Receding Gear, Boss and Hammer Dogs, 51 ft. each of V and Flat Tracks, all complete. Made by Wm. Hamilton Mfg. Co., Peterboro, Ont
1—Gang Saw Mill, Gate 42 in. wide, 50 in. deep, 18 in. stroke, Crank Shaft 9 in. dia., 10½ ft. long; Drive Pulley 48 x 24 in., Flywheel 78 in. x 8 in. Live and Idle Iron Rolls, etc., etc., all complete and good as new. Made by Stearns Mfg. Co., of Erie, Pa.
2—4-Saw Edgers, made by Stearns Mfg. Co., Erie, Pa.
1—2-Saw Edger, made by Wm. Hamilton Mfg. Co., Peterboro, Ont.
1—Six Saw Slash Table with Arbors, Saws, Sprocket Wheels and Chains complete.
1—Trimmer 30 x 16 ft. with Arbors, Saws, Sprocket Wheels, Chains and Gauges complete.
1—Sorting Table, with Chains, etc., 100 feet long.
2—Log Jacks each 100 feet long with 200 ft. forged chain, Sprocket Wheels and Friction Driving Gear complete.
1—40 in. McEachren Hot Air Fan.
1—60 in. Sturtevant Hot Air Fan.
1—15 in. Blast Fan.
All necessary Belting, Saws, Log Canters, Log Lifters, Sawdust and Refuse Conveyers and Carriers, Live and Idle Rolls, Transfers, Shafting from 1½ to 11 in. dia., Pulleys from 6 in. to 102 in. dia., Straight Face, Bevel and Mitre Gears, Paper and Iron Frictions, Filing Room Tools, Saw Grinders, Anvils, Saw Fitting Tools, etc., etc.
10—Hydrants with about 2000 ft. of pipe from 3 in. to 10 in. dia. and two Hose Carts.
60—Lumber Roller Cars.
A lot of Electric Lamps and Fixtures.
The above Machinery, etc., is all from the best and most reliable makers. All in good condition, practically as good as new and ready for immediate work.
Also one large SPRUCE TIMBER LIMIT, has never been cut over, and somes maller ones partially worked.

TERMS: All items subject to personal inspection before purchase. Also subject to prior sale. Offers for the whole in bulk or in part to suit purchaser will be considered. Payment to be made in cash for Machinery where it now stands. For any further particulars apply to

F. J. DRAKE, BELLEVILLE, ONT.

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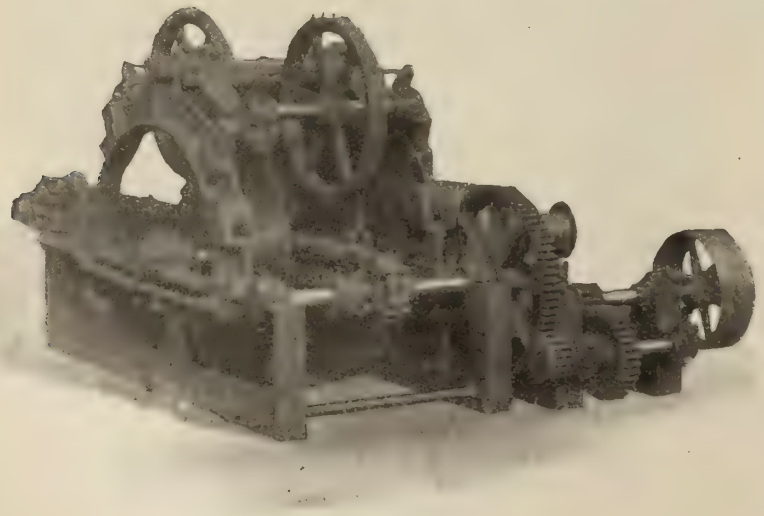

because you can't cut ties as fast as you want to. Just throw out your old make-shifts and put in one of our up-to-date

Log Siding or Tie Machines

Slabs both sides of the log accurately and rapidly at one operation. Both saws movable to or from the centre simultaneously by means of a lever within the sawyer's easy reach, and the spacing indicated on a quadrant in plain sight. Will handle logs from 4½ to 20 inches in diameter and from 30 inches in length up. This machine will cut

3000 TIES IN 10 HOURS.

In any mill using a Gang, this machine, if used for preparing the cants, will increase the output 20 per cent. It is a compact machine, strongly built, as the cut indicates, to stand hard and continuous usage. It is without an equal, let alone a superior, in this line, because

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Let us quote you on one of these machines. Don't forget that we also build a complete line of **SAW MILL MACHINERY.** Our **TRIUMPH TURBINES** are great power developers.

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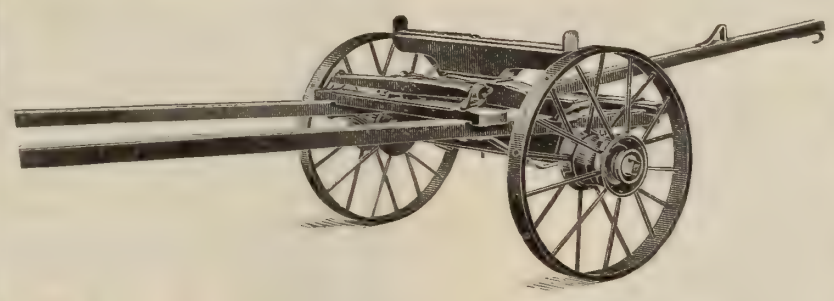

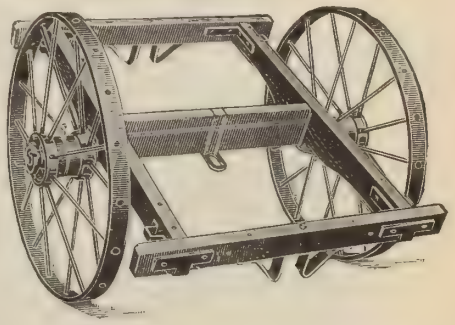

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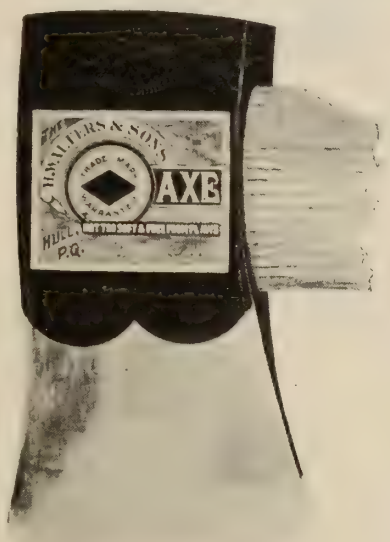

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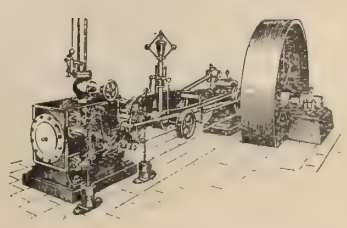

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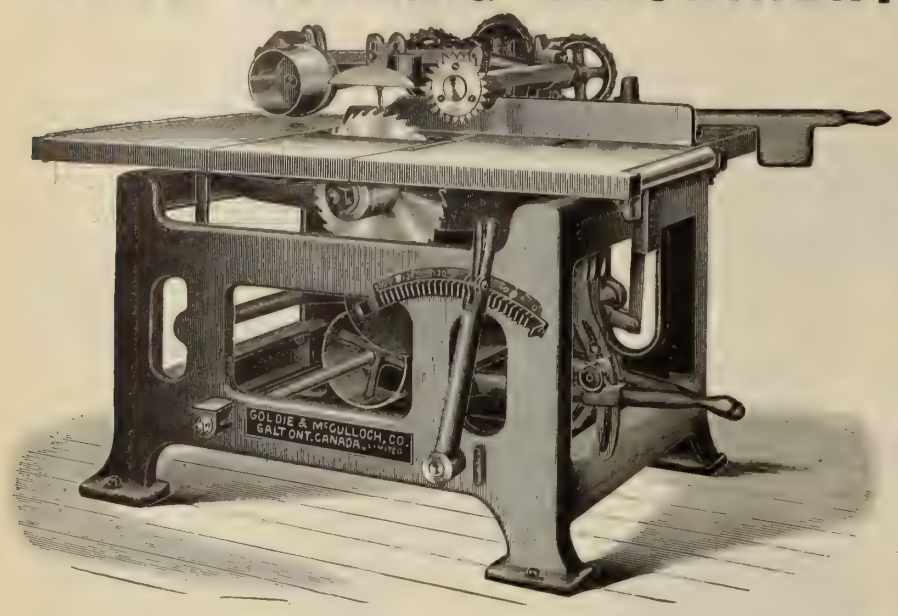

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Will rip 16″ wide, table drops for 3″ cut. Will rip pieces as short as 14″.

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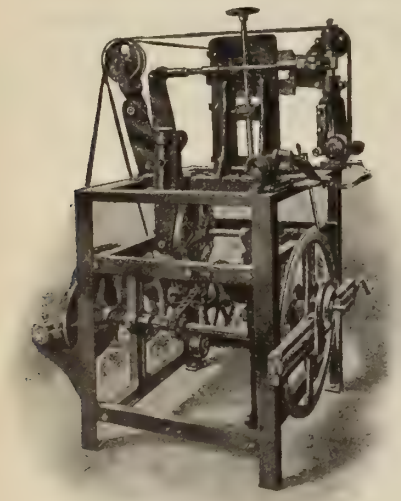

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THE "HANCHETT" SAW SHARPENERS

are the most modern and practical machines manufactured for sharpening saws automatically.

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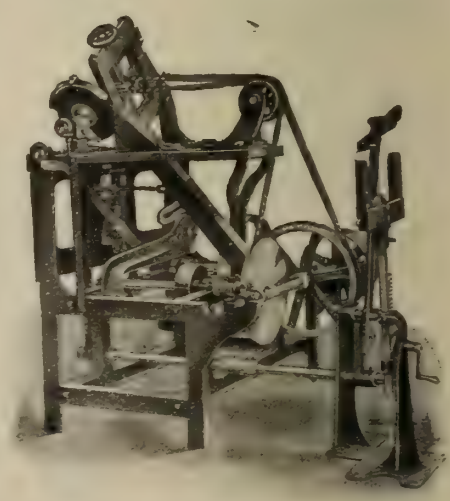

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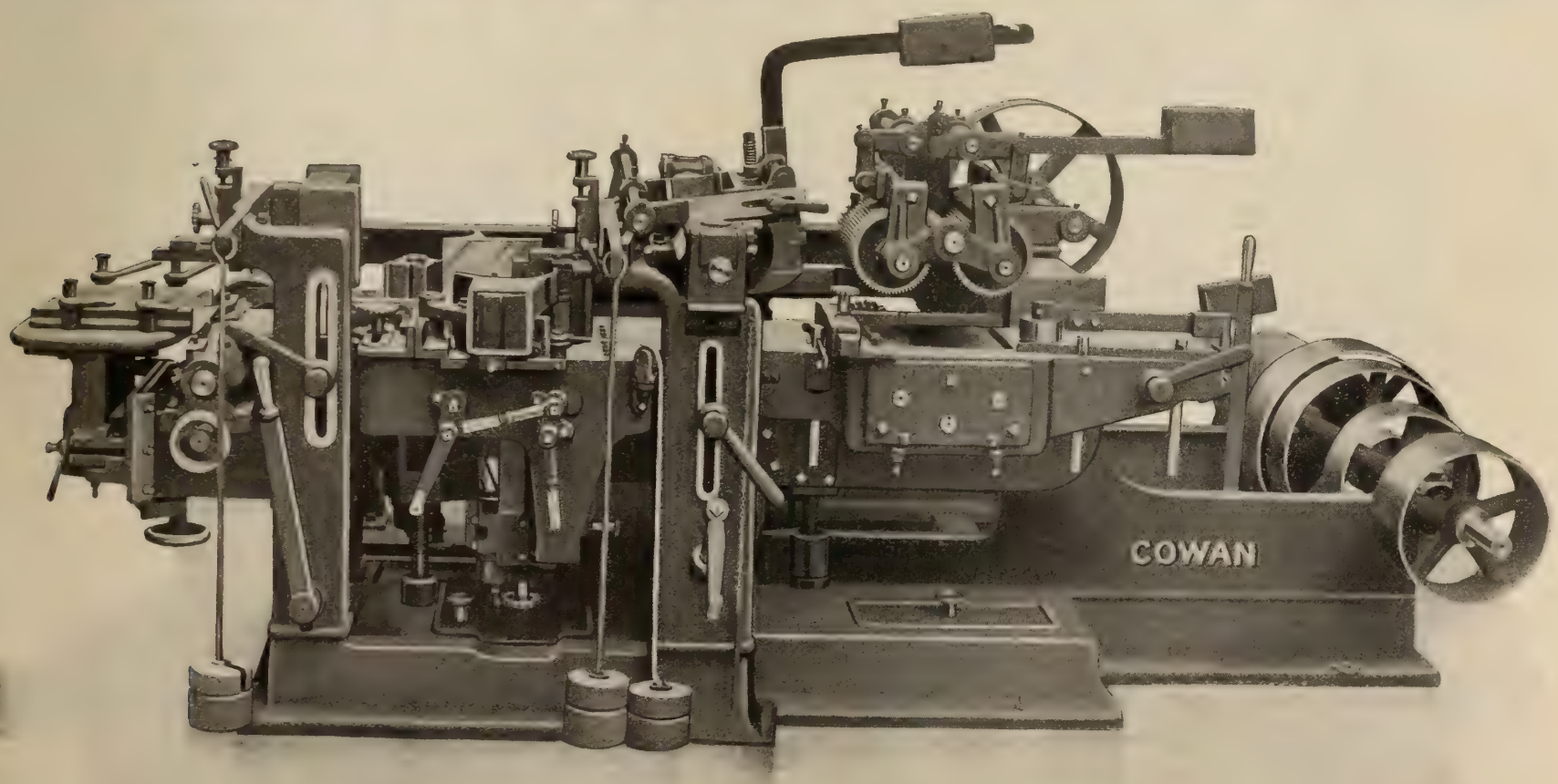

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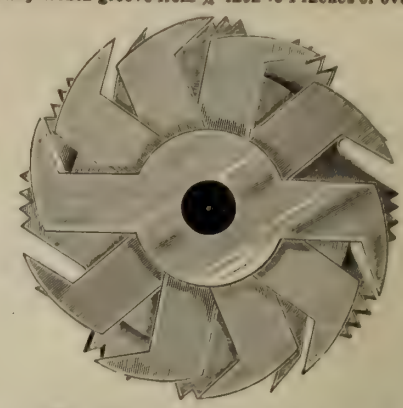

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This is the only Dado Head on the market that gives entire satisfaction on all classes of work No screw adjustment. For different width grooves, simply remove or add inside cutters. Sold by builders and dealers of woodworking machinery in all parts of the United States. Will send on approval, in competition with any other make on the market; if not the best return at our expense. HUTHER BROS. SAW MFG CO., Inc., 229-231 Mill Street, ROCHESTER, N. Y., manufacturers of Circular Saws, Morgan Pattern Lock-Corner Box Cutters, Concave Saws, etc.

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Date of Publication of 1906 Edition, FEBRUARY 28TH.

LONDON : THE CARTER PUBLISHING CO., 8 New Bridge St., E.C.

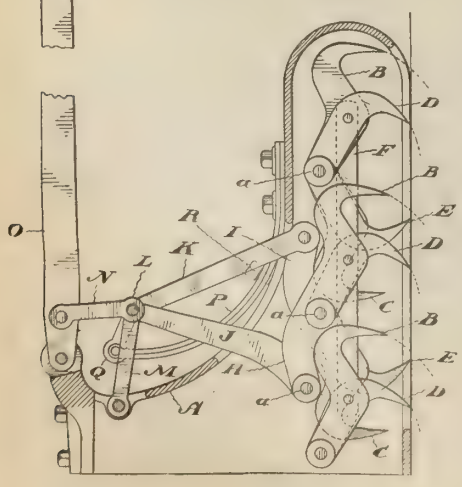
NEW PATENT MILL DOG

We claim many points of superiority for our Patent Mill Dog, of which seventy-five have been sold

Each mill dog contains ten dogs; six of the dogs have the down-forward motion and four of them the upward motion, so that the log or cant is dogged both on the top and bottom, preventing it from turning its position on the head-block. Even if the log were dogged, not touching the head-block, it would hold the log as well.

It will be seen by the cut that these ten dogs are fastened on the pivot, pin or bolt marked "A" on the cut, and connected with link bars from the principal dog to the lever "O," which operates all the dogs.

Fig. 1.



There are five of the dogs which project more than the others, about two inches from the head-block, and called the log dogs; and five which project about ⅝ inch from the head-block, and called the board dogs; but when dogging a board or a plank or a stock, all the dogs come evenly out of the head-block, about ⅝ inch, so that in dogging a board or a stock, both the log dogs and board dogs grip it, providing that the stock or board is wide enough to take all the dogs.

This patent mill dog will dog perfectly safe in all classes of timber, be it pine, hemlock or hardwood of any description, and besides it does not tear the board or stock.

Manufactured by

P. PAYETTE & COMPANY
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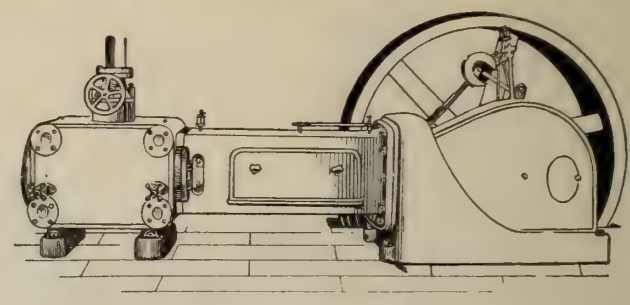
LONG STROKE ENGINES



We manufacture a full line of sizes of the style of engine shown in cut, either Corliss type or with Sweet balanced valve.

They are fitted with Robb-Armstrong automatic governors, giving close regulation and high economy.

Oil is forced through piping to all bearings, ensuring positive and copious lubrication.

They are built on the interchangeable system and duplicate parts exact in fit can be supplied on short notice.

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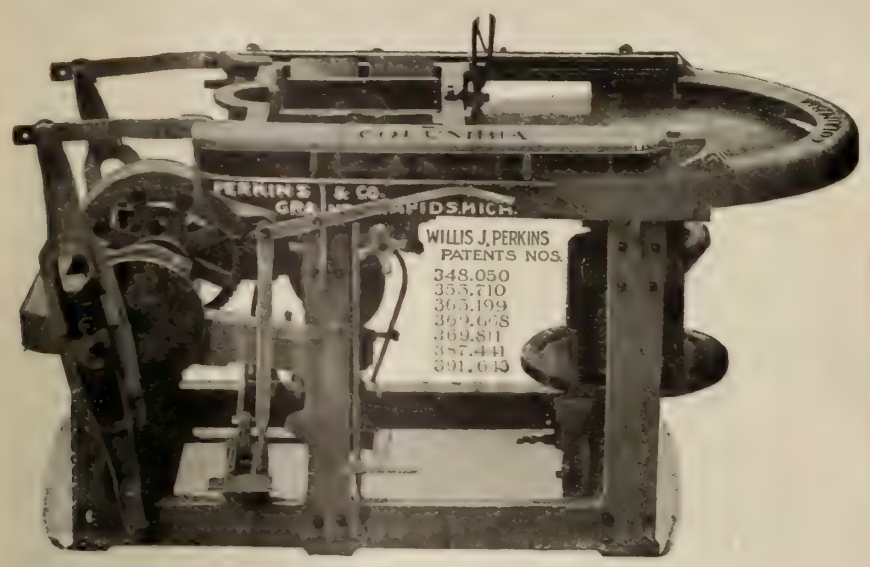

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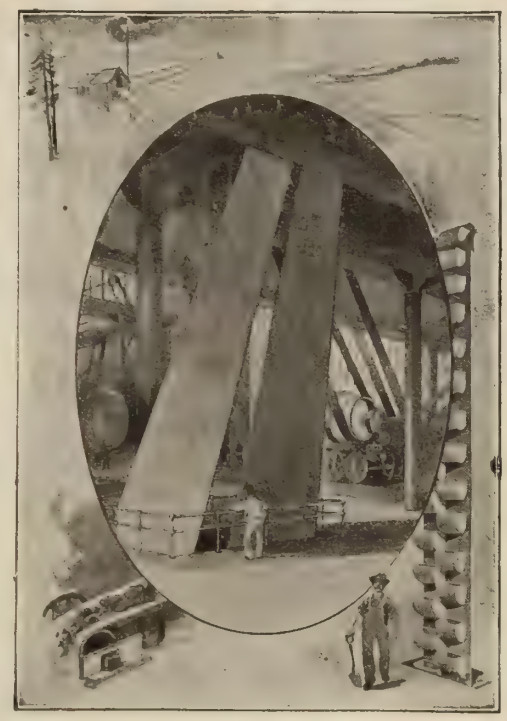

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MORE POWER
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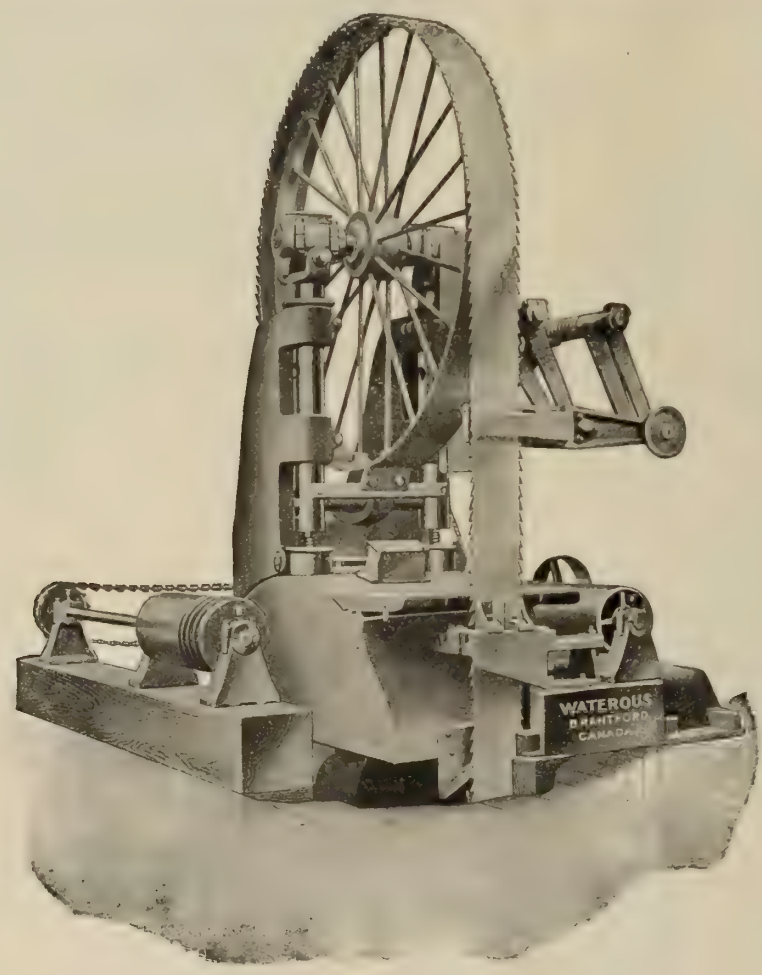
and increase your output 30 per cent.

Change your Circular Saws to DOUBLE CUTTING BANDS and Save Lumber



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Uses 8″ Double Cutting 34 ft. Saws

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We Manufacture a full line of Sawmill Labor Saving Machinery—

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SHERMAN FLOOR BORING MACHINES

For Attachment to Any Flooring Matcher Running Flooring Face Up or Down.

Above cut shows machine boring flooring run face up. Our boring machines have been on the market for the past ten years, and are well known to be the best machines on the market for their purpose. Since fast-feed matchers have come into use, it may be said that they are the only boring machines that can be used as an attachment. They require no floor space and there is no extra cost for handling.

We make the

SHERMAN FACE BORING MACHINE
for attachment to any flooring machine, to bore jointed flooring.

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SHERMAN END MATCHING MACHINE
for end matching flooring.

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Reliable Veterinary Remedies

No logging outfit is complete without a supply of reliable veterinary remedies. Getting the wrong kind means the loss of the use of your horses when time is valuable.

Johnson's Veterinary Remedies

are guaranteed never to fail when used as directed. You get your money back if they ever do.

They are

Johnson's Horse Liniment No. 1.
A penetrating Alcoholic Liniment. Put up in one gallon jugs, with full directions, per imperial gal. **$4.50**

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A combination of the best oils used as liniments, imp. gallon . **$3.00**

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A sure and speedy cure for colic Imperial gallon **$5.00**

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Positively the best all-round healing ointment made. In use by the largest owners of horse flesh in Canada. Put up in 2 lb tins, each . . **$2.25**
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Johnson's Condition Powders. (Concentrated).
Put up in bulk, per lb . . . . **30c.**

These goods being put up in bulk are more economical than others, as cost of bottling, etc., is saved.

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In addition to our Veterinary Remedies we make a line of medicines for lumbermen, including a strong, penetrating liniment, healing ointment, cholera cure, liver pills, cough syrup, in fact anything in the form of Camp Drug Supplies. We know that there are no better remedies made than those we offer. There may be others nearly as good, but they lack our guarantee. Satisfaction or money back. A trade discount of 10% allowed off all orders amounting to $100.

Send postal for printed matter.

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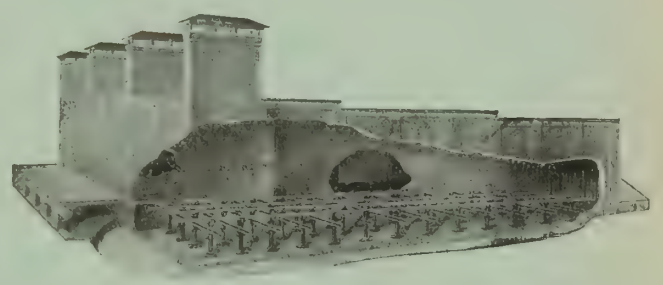
FAR advanced in the novel (patented) arrangement of its novel heating system; free from complications in its construction; easy and inexpensive to install; practically automatic in operation; guaranteed to accomplish specific results.—

That, in brief, describes The Standard Dry Kiln; it is ten years ahead of best other drying system in use.



And how it does fetch the stock out! Neither baked nor warped nor discolored; but BONE DRY, soft and bright.

Write for catalogue and estimates. State your requirements and present troubles if you wish.

The Standard Dry Kiln Co.
631 S. Pennsylvania St., Indianapolis, Ind.

JEFFREY SPECIALTIES FOR WOOD WORKING INDUSTRIES

LOG JACK.

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Wire Rope Conveyer transferring lumber over bridge.

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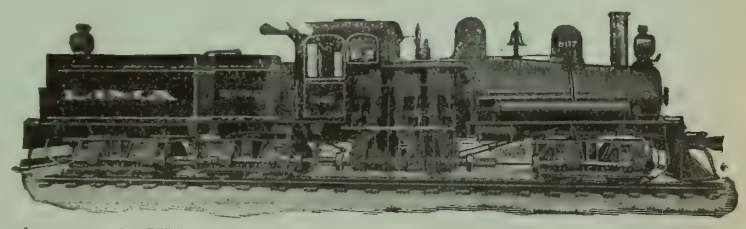
LOGGING IN 1906 IS NOT WHAT IT WAS IN THE LAST CENTURY

Up-to-date methods are pursued by the men who are hauling money out of the woods.
Old fashioned methods were picturesque but they were wasteful of time and capital.
Locomotive traction on spur tracks has superseded every other way of getting timber to market, and the SHAY GEARED Locomotive has proven to be the most successful for work of this character.



It pays others to use the SHAY and it will pay you.
If you do not know this locomotive let us tell you about it. Catalogue No. 13 I with full information will sent on request.
Catalogue No. 14J shows Mogul, Ten-Wheel, Consildation and other types of light, Direct-Connected Locomotives recently built at our shops.

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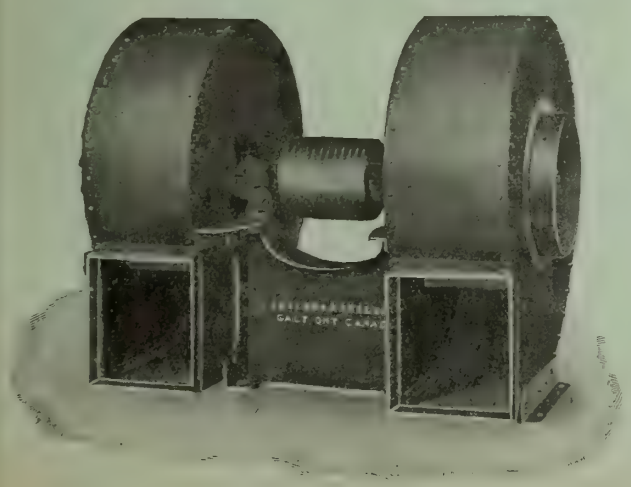

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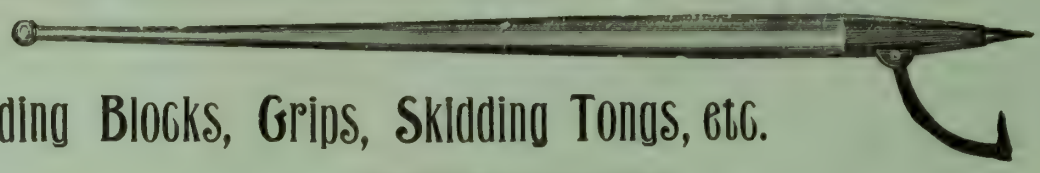
On our "BOSS" PEAVEYS and CANT HOOKS we use only FORGED STEEL SOCKETS. They are the LIGHTEST and STRONGEST on the MARKET. They are all fitted with air dried SPLIT ROCK MAPLE HANDLES, and shipped to every lumbering point in CANADA.



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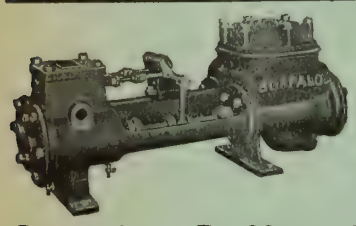

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EVERY TYPE FOR EVERY DUTY

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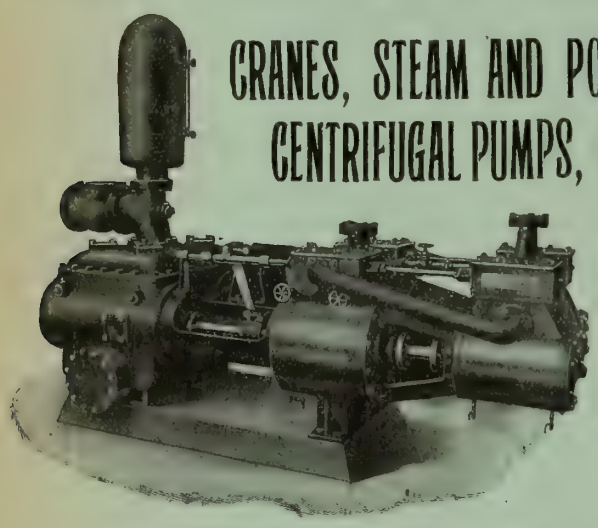

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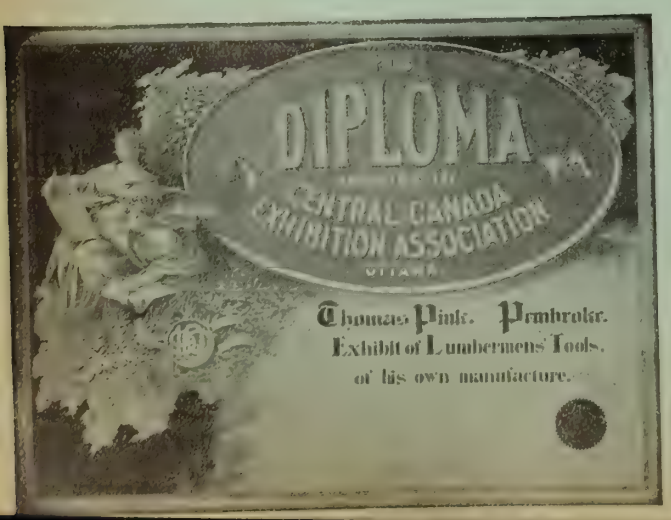

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The Standard Tools

In Every Province of the Dominion, New Zealand, Australia, Etc.

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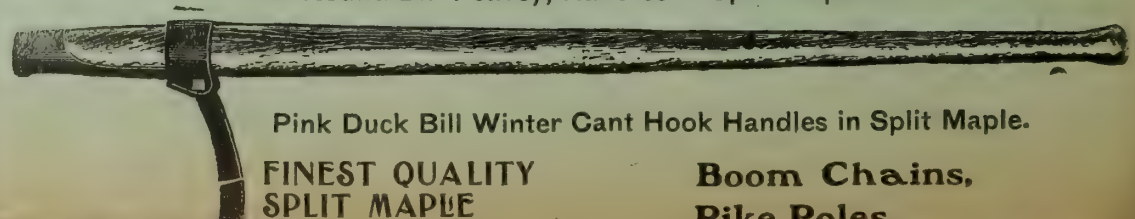

Pink Duck Bill Winter Cant Hook Handles in Split Maple.

FINEST QUALITY SPLIT MAPLE

Boom Chains, Pike Poles,

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We use the best sacks that can be bought. We have the best facilities for giving prompt shipment.

Be sure you wire or write us before you buy. The quality of Oats we ship is known all over

Nova Scotia Spruce Piling, Spars and Poles.

PILING

From 20 ft. long 10 in butt to 80 ft. long 14 in. and up butt

SPARS

From 16 ft. long 2 in. butt to 60 ft. long 20 in. butt.

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THE Northland of Ontario is rich in timber, minerals and fertile land.

The white pine, which has vanished from most of its haunts south of the great lakes, musters its serried ranks over many hundred square miles of virgin forest; and in the spruce, poplar and Banksian pine which line the southern and northern slopes of the Height of Land there is the potentiality of a world's supply of paper, mill-board and other articles made of pulp. There are besides large quantities of birch, maple, cedar, and other useful varieties of wood.

In minerals, the wealth of Ontario is equally great and varied. The famous nickel mines of Sudbury are the largest producers in the world, and the extraordinarily rich silver ores of the new camp at Cobalt have made the name of that region a household word. Iron ore is widely distributed and the list of minerals is not exhausted by gold, copper, lead, zinc, mica, corundum and iron pyrites. Granite, sandstone, limestone, marl and brick clays are also abundant.

There are millions of acres of first-class clay land awaiting the settler in a good climate and covered with merchantable timber. Government railways now building will open much of these tracts.

For further particulars, maps, reports and land, timber and mining regulations, apply to

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Minister of Lands, Forests and Mines,

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This Journal carries the advertisements of 87 Lumber Firms, three times as many as any other Canadian paper

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REACHES REGULARLY MANUFACTURERS, BUYERS AND SELLERS OF TIMBER PRODUCTS IN EVERY PART OF CANADA AND LEADING IMPORTERS ABROAD

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Your System of Book-keeping this year. We would like to assist you.

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Will all assist you. We have also special forms especially gotten up for the lumber business. Write us.

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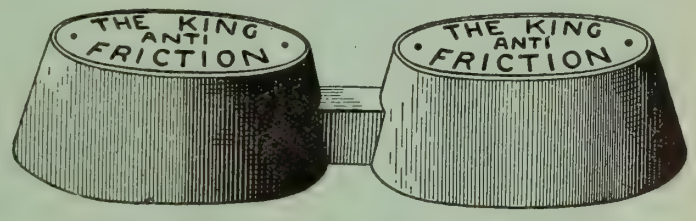
ROBERTSON'S
KING BABBITT
The Best and Cheapest Metal for Saw Mill Machinery
PRICE 20 CENTS PER POUND



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Some people buy Belting on price, others on quality. Which is wisest?
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GENUINE
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Never is affected by wetness, and does not stretch
Excels in Transmission Power
Always Uniform.
LARGE STOCK ON HAND
WRITE TO SOLE AGENTS:
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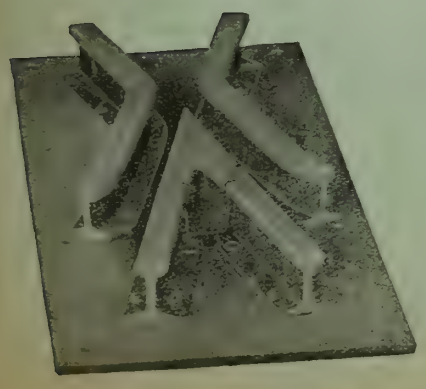

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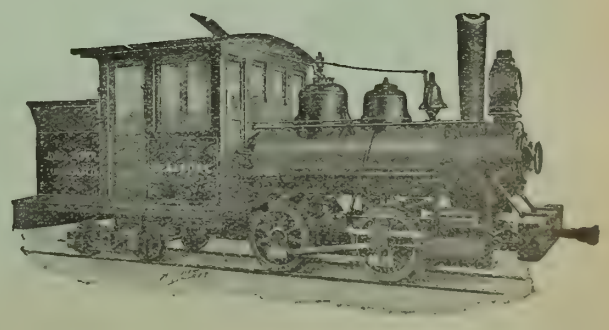

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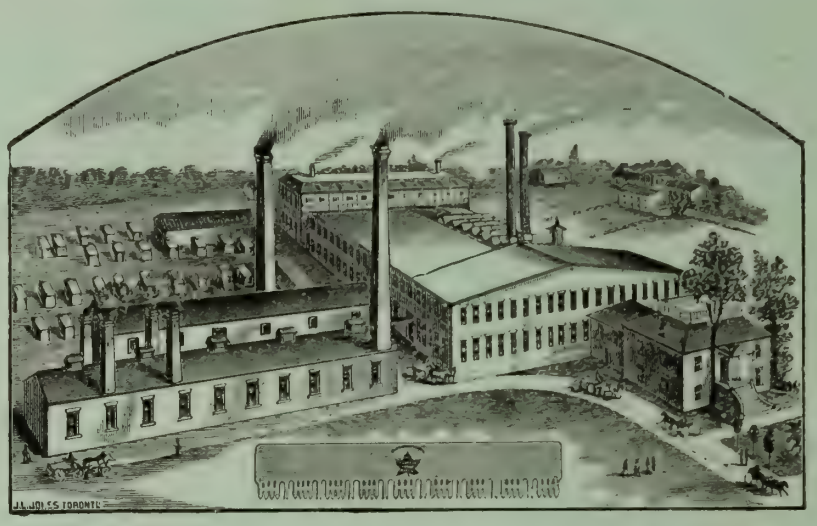

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HAND SAWS
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GROUND THIN ON BACK

Save Labor — Save Gumming
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This Saw Stands Without a Rival

AND IS THE

FASTEST CUTTING SAW IN THE WORLD!

Its Superiority consists in its Excellent Temper. It is made of "Razor Steel," which is the finest ever used in the manufacture of Saws. We have the sole control of this steel. It is tempered by our secret process, which process gives a keener cutting edge and a toughness to the steel which no other process can approach.

Maple Leaf Saw Set

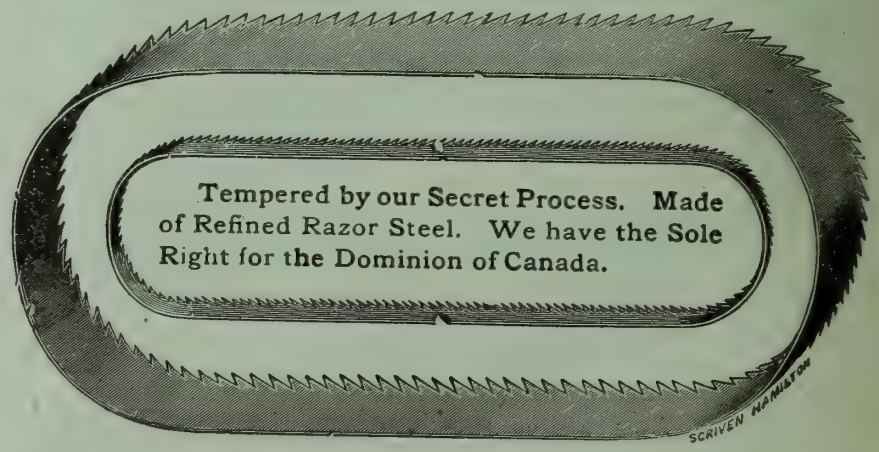
MANUFACTURED BY

SHURLY & DIETRICH, Galt, Ont.

Directions.—Place the set on the point of tooth, as shown in the accompanying cut, and strike a very light blow with a tack hammer. If you require more set, file the tooth with more bevel.

If you follow directions you cannot make a mistake. Be sure and not strike too hard a blow, and it will set the hardest saw. **On receipt of 40 cents we will send one by mail.**

We are the only manufacturers in the world who export Saws in large quantities to the United States.


Tempered by our Secret Process. Made of Refined Razor Steel. We have the Sole Right for the Dominion of Canada.
SCRIVEN HAMILTON

We Manufacture

HIGH GRADE BAND SAWS

Of All Widths and Lengths.

These Saws are made of Refined Razor Steel, and tempered by our Secret Process; for Fine Finish and Temper are not excelled.

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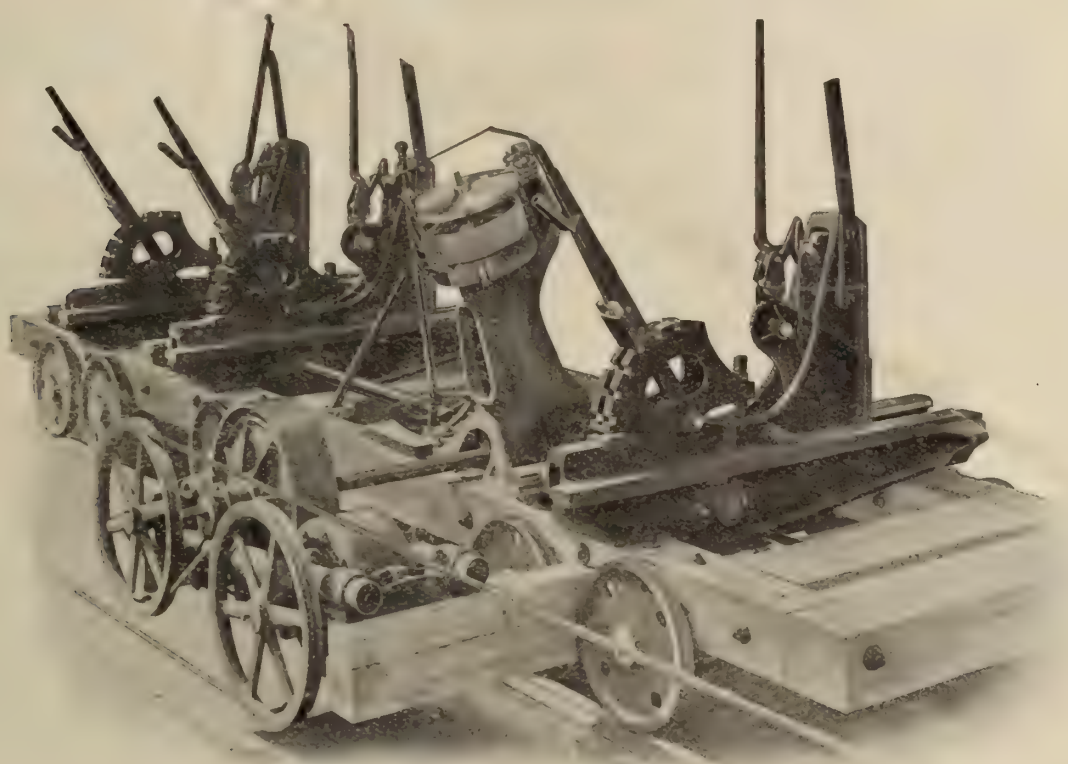

TROUT POWER SET WORKS

This is a view of the TROUT POWER SET WORKS applied to rack and pinion blocks. At the top of the set works is a dial carried on a bearing at the top of the controller shaft. It turns freely on this bearing but is connected with the shaft by means of an internal gear and pinion. The purpose of this is to operate the dial plate exactly in accordance with the movement of the knees so that the dial plate shows at all times the exact distance of the knees from the saw. Saw Mill Carriages and Accessory Machinery are fully described in Catalogue 123.

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We build the "Lidgerwood" engines for logging purposes, for mines, quarries, railway and bridge building, pile driving and general contracting.

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Dynamos, Motors, Switchboards and Transformers. Complete Electric Light and Power Plants built and installed.

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Mark of Quality on Rubber Goods. Look for it.

IT'S UP TO YOU!

A mill man's life is beset with daily worries. A large amount of annoyance is traceable to the **power facilities** of his mill—either machinery or belting.

Sometimes it's the fault of the Belt. **Sometimes** the **Belt** is **overworked**—not wilfully, but simply because the **pulleys** are **small** and the **speed high.**

We've frequently ran against this condition—and have spent a lot of money designing and manufacturing a **perfect mill Belt,** calculated to give maximum service under the most difficult conditions.

We offer our **"Columbia" Belt** to the lumbering interests of the Dominion, secure in the knowledge that it's the **best Belt in the World** for m[illegible] under difficult conditions. [illegible] more plies and of a lighter weight duck than [illegible]ordinary belting. Is also much thinner. The [illegible]tion used is the **highest known to the tr[illegible]**

If you've not [illegible]ready seen a sample of "Columbia" Belting, **writ[illegible] to-day** to our Sales Branch nearest your section.

We want your Rubber business and have the goods you need.

Our Experts cheerfully confer with customers, free of expense, as to Belting for special conditions.

THE CANADIAN RUBBER COMPANY OF MONTREAL LIMITED

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Long logs and heavy logs are loaded by the

McGIFFERT Log Loader

just as easily as other kinds of logs.
Fact is -- its heavy steel construction, great power and wide base make it equal to any condition where a loader could possibly be used. (15,000 pound logs are handled by it.)
It *propells* itself, *stops* and *switches* its own cars, and is *always ready.*

Ask for our booklet

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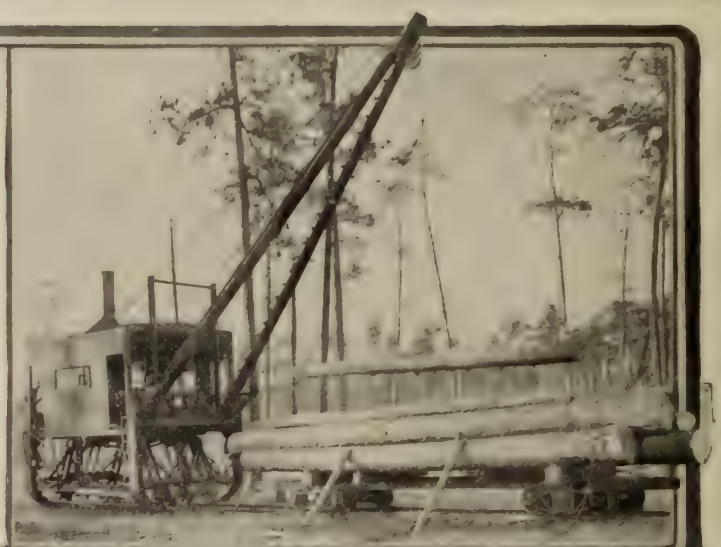
DULUTH, MINN.



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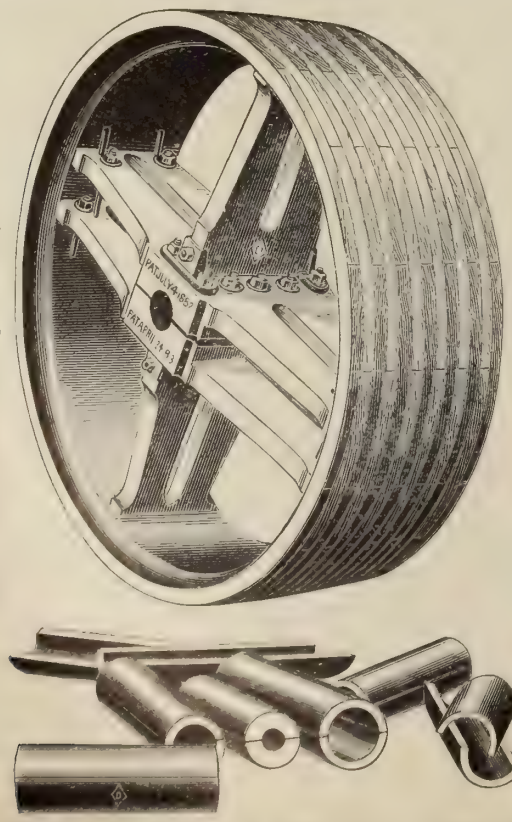
DODGE

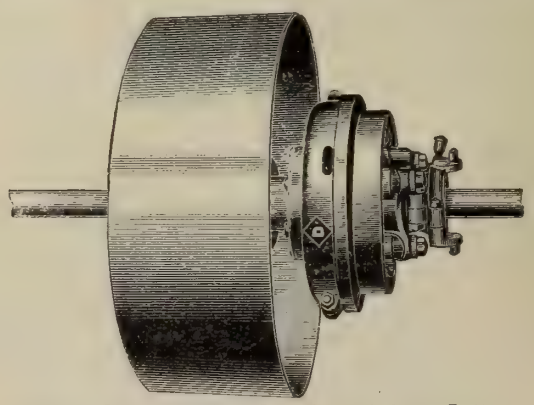
STANDARD WOOD SPLIT PULLEYS **FRICTION CLUTCH PULLEYS**

FOR SAW MILLS

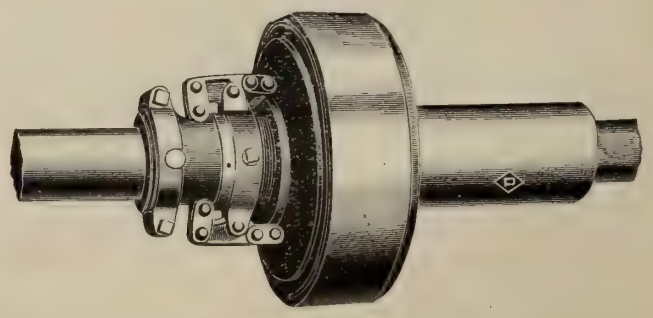
We Guarantee Every Pulley.



EVERY PULLEY THOROUGHLY NAILED



Dodge Split Friction Clutch and Iron Pulley.



Dodge Solid Friction Clutch Mechanism with Extended Sleeve for Pulley.

USED IN THE PRINCIPAL MILLS AND FACTORIES EVERYWHERE

SOLE MAKERS

Dodge Manufacturing Co. Toronto, Montreal

COBBS HIGH PRESSURE SPIRAL PISTON AND VALVE ROD PACKING

"Cobb's" Packing is especially adapted to withstand heat and highest pressure. The rubber core is oil and heat-proof and will not harden, but remain elastic indefinitely. The outside covering is made of material that is not affected by heat. The lubricant employed is the result of much scientific research and is absolutely free from grit or acids.

We make everything in rubber requisite for an engine room. The following are some of our specialties:

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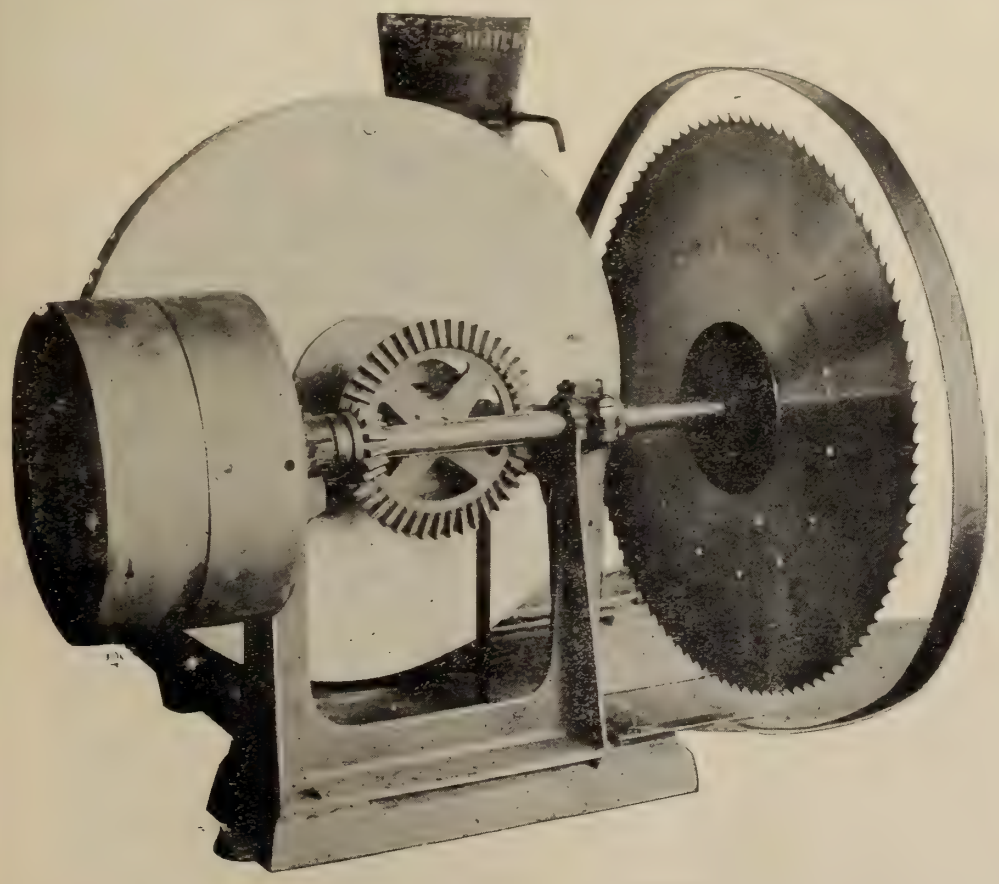

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The Twin Screws are arranged with flexible joint to raise up in crossing portage

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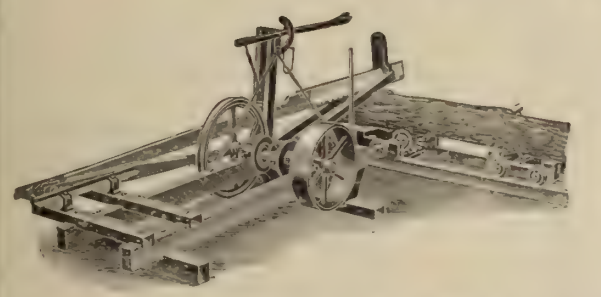

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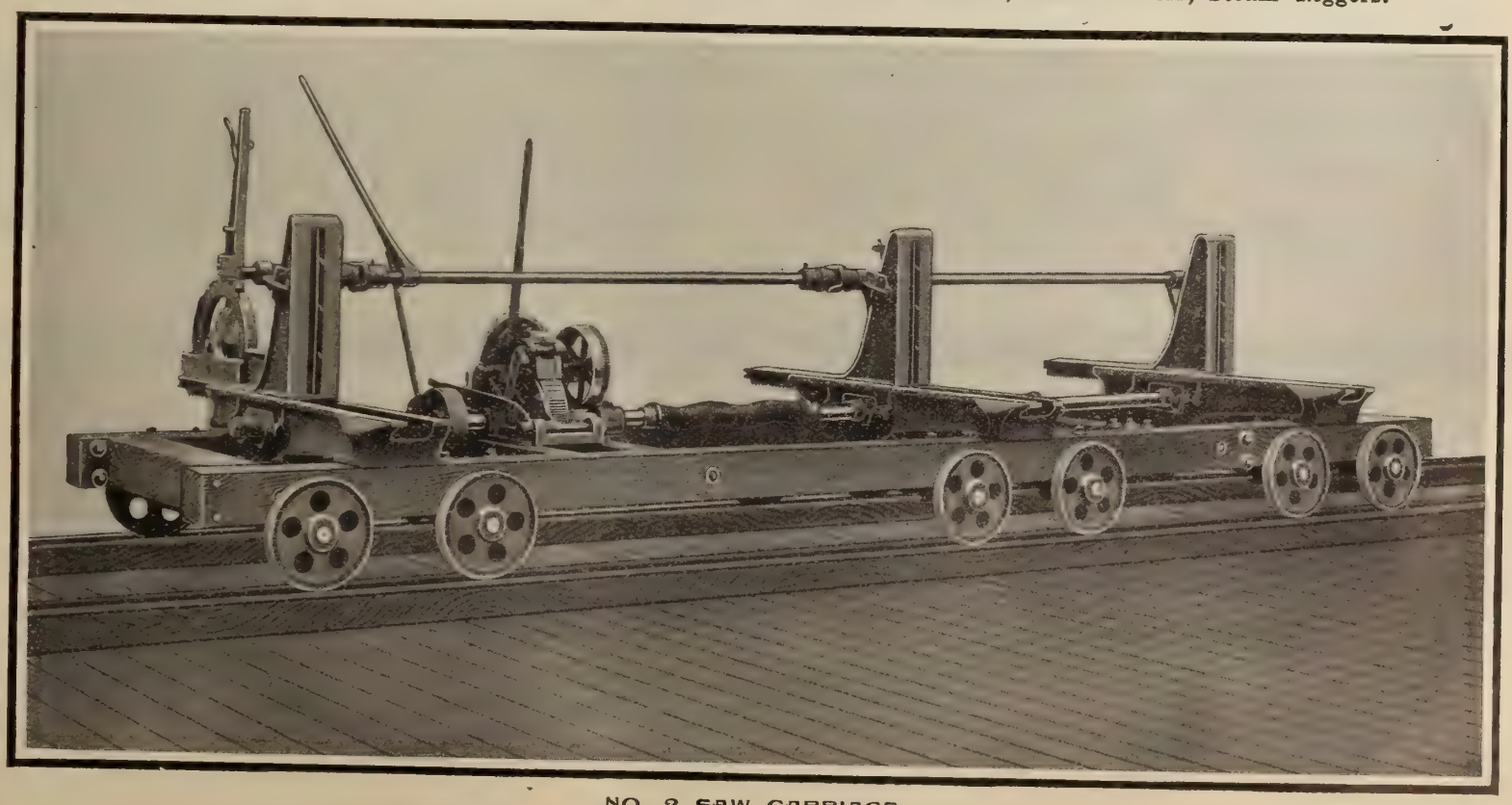

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All sizes from 15 to 300 H. P.

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Carriage is made to receive larger blocks than any other upright machine

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If you want to make shingles that bring the highest price, you must use the Johnson Machine.

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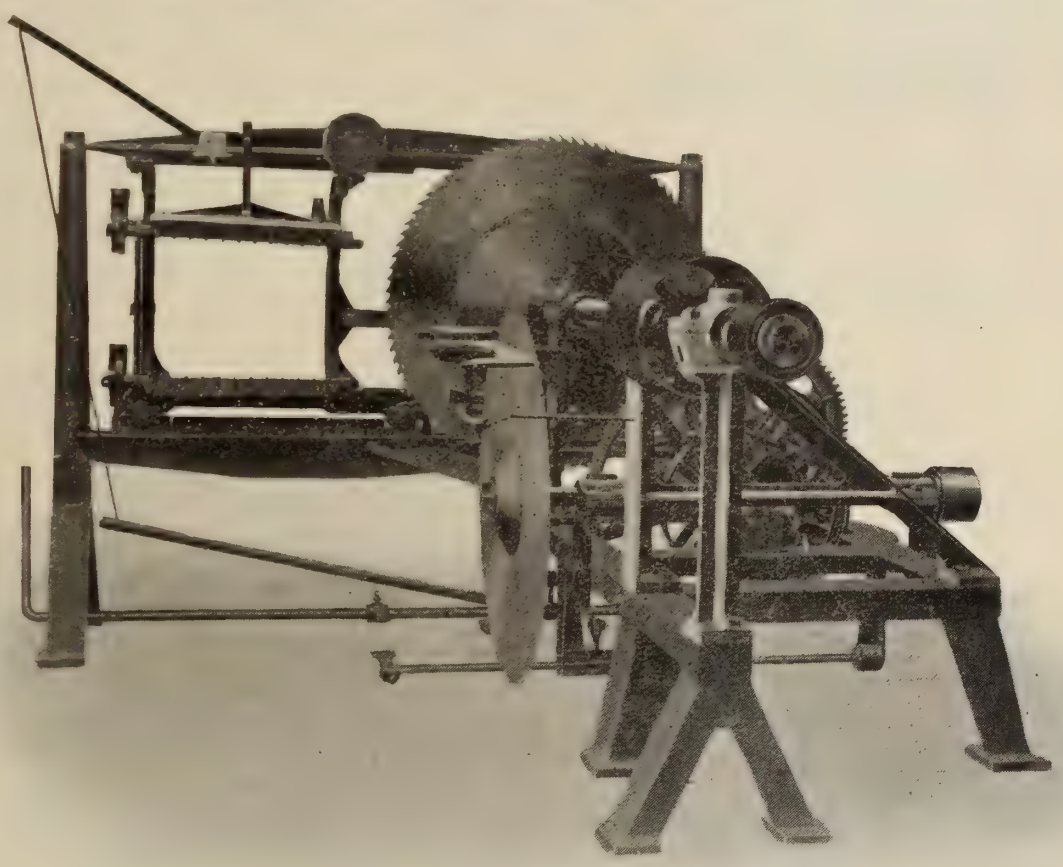

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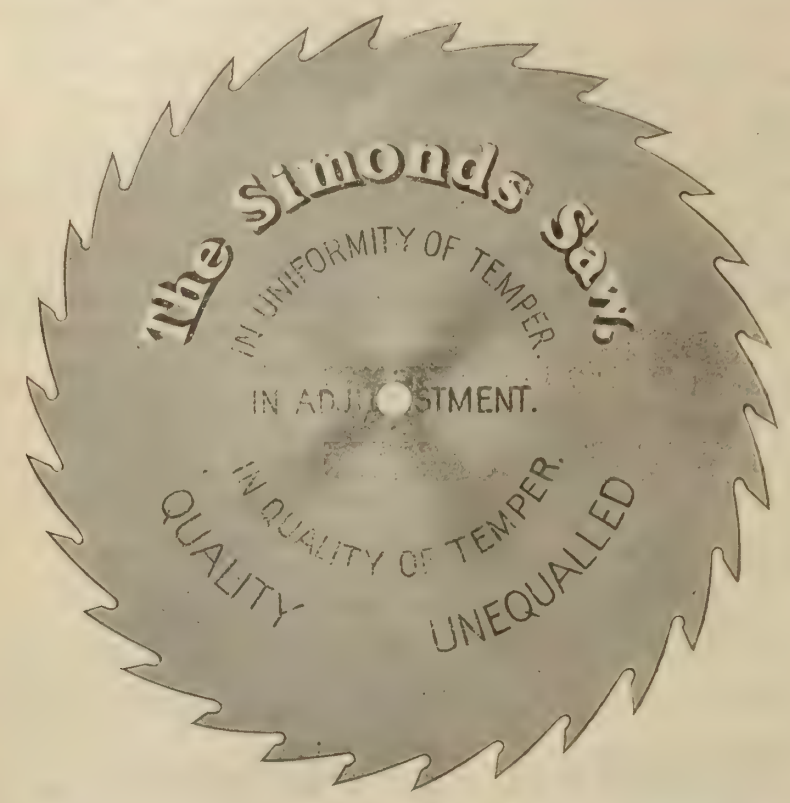

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We invite the criticism of every saw user in Canada. We ask you to keep Saw costs per thousand feet of lumber cut. We propose to save you money by furnishing you with a **Simonds Saw** made of **Simonds Steel:** not by selling you these at the lowest price, but by furnishing them at a fair price and giving you the highest quality.

During the year just past, we purchased and installed a great many new machines, furnaces, etc., incidentally for the purpose of making this the most up-to-date Saw and Machine Knife plant in the Dominion of Canada, and primarily for the purpose of making Simonds Canada Saws and Machine Knives extra high grade articles.

We solicit your orders and ask a fair trial. We are willing to stand by the verdict.

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A Logging System that is not an Experiment.
Tested by Time and its Efficiency proven by Economic Results.
Loaders built of weight and strength to suit any class of timber.
They work on rough or smooth track—on curves or grades.
Efficient — Full Particulars on Request — Simple in Operation

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THE INDEPENDENT LUMBER CO. LTD.
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GET QUOTATIONS FROM OUR NEAREST BRANCH
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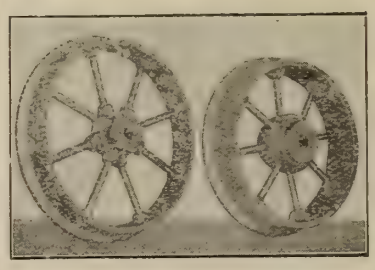

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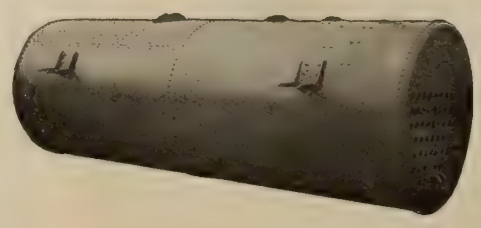

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CANADA LUMBERMAN
AND WOOD-WORKER

VOLUME XXVIII. NUMBER 3. | TORONTO, MONTREAL — MARCH, 1907 — WINNIPEG, VANCOUVER | TERMS, $1.00 PER YEAR Single Copies, 10 Cents

ANNUAL MEETING OF ONTARIO LUMBERMEN

The annual meeting of the Lumbermen's Association of Ontario was held at the Queen's Hotel, Toronto, on Wednesday, February 27th, the President, Mr. J. B. Miller, presiding.

The following were in attendance:

J. B. Miller	Toronto.
John Donogh	Toronto.
W. D. Lummis	Toronto.
M. Burton	Barrie.
Robert Laidlaw	Toronto.
W. J. Smith	Toronto.
William Laking	Hamilton.
W. B. MacLean	Toronto.
A. MacLean	Toronto.
W. B. Tindall	Toronto.
W. C. Laidlaw	Toronto.
Dwight J. Turner	Toronto.
John Charlton	Lynedoch.
W. A. Charlton	Toronto.
Thomas Charlton	North Tonawanda.
E. W. Rathbun	Deseronto.
George Thomson	Goderich.
W. P. Bull	Toronto.
J. E. Walsh	Toronto.
Thomas Patterson	Hamilton.
A. McCall	Simcoe.
H. H. Miller	Toronto.
James Thomson	Hamilton.
Charles H. Taylor	Hamilton.

T. S. Young, CANADA LUMBERMAN, Toronto.

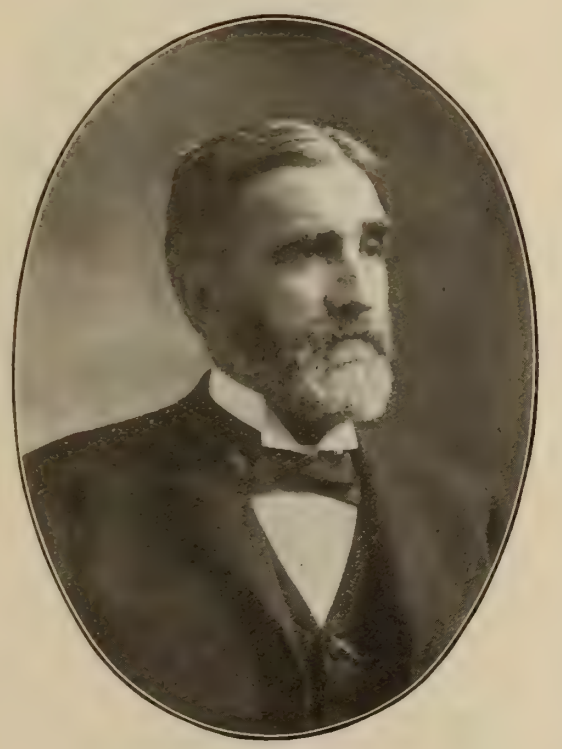
After a splendid luncheon, provided through the hospitality of the president, had been partaken of and "The King" duly honored, the minutes of the last annual general meeting and of the meetings of the Board of Management were read by the secretary, Mr. W. B. Tindall, and approved.

PRESIDENT'S ADDRESS.

The President then delivered the following address:

Gentlemen,—It once more gives me great pleasure to meet you all as President of the Lumbermen's Association of Ontario. The Association, I am glad to report, is in a prosperous condition, notwithstanding the fact that we have had no general meeting and only a few committee meetings during the past year. One of the principal reasons for our not having met together oftener is that everybody has been too busily occupied in taking advantage of the high prices for lumber and other products manufactured by the lumberman. As you all know, the last year has been, if anything, more prosperous than the previous year. Prices advanced to a point which we thought it impossible for them to reach a year ago, and, although I think that they are nearly as high as they are likely to go so far as white and red pine and spruce are concerned, I still expect to see a considerable advance in the price of hemlock. A year ago I predicted that hemlock would reach $15 per M. during the summer which figure was not only reached but passed before the summer was out. As far as I can now see, there is no reason why hemlock should not reach a base price of at least $17, and I would not be surprised to see it go to $18 before the season is out.

Of course the same conditions have existed in regard to the cost of manufacture—that is, everything the lumberman uses has been high. Labor has been very high, and of a much lower quality than previously.



MR. W. A. CHARLTON,
President Lumbermen's Association of Ontario.

This deterioration in labor has, I think, been largely caused by the native labor going west and taking up farms, and having been replaced largely by foreign labor, which you all know is very unsatisfactory in the woods.

Stumpage has also advanced in proportion, and I think in a greater proportion than the advance in the price of lumber, so that, although lumber prices are largely enhanced, the net profit to the manufacturer has been very little increased. The one good feature of the trade has been that stock have moved freely, and that it has not been necessary to hold over any quantity of lumber. Good lumber has had very little increase—the principal increase being in the lower and common grades.

As to the coming season, I have to say that in Canada the cut is likely to be as large as it was last year; but in the United States there is going to be a serious falling off. From the best information I can get, the Duluth cut will be reduced two hundred million, and the total reduction in the cut of white pine will be in the neighborhood of five hundred million. The hemlock production in the United States, which last year reached some 1318 million, will likely be about the same this year.

Stocks on hand are much lighter than they were a year ago, and already the majority of cuts have changed bands, being now in the hands of the middlemen. This always has a tendency to stiffen prices, and I do not see any reason why prices should not hold up during the season. The demand for box lumber and car lumber is greater than ever, and the supply very short.

Some of the principal questions that we will have to take up at this meeting are that of car supply, the staking of cars, and reciprocal demurrage. Your Committee met with the Joint Traffic Association and discussed fully with them the question of car stakes and car supply, and the matter was left for them to communicate later with the Committee. Up to the present we have heard nothing from them. From the circular sent out by the Secretary on November 19th, the members of the Association are apparently in favor of railways being compelled to pay reciprocal demurrage. I understand that several of the members are prepared to speak on these subjects. We also have with us Mr. Walsh, the Transportation Manager of the Canadian Manufacturers Association, who will give you full particulars as to what has been done by the Manufacturers Association in regard to these matters.

Nothing has come up during the last season in regard to the duty of lumber. On account of the general prosperty no person has, apparently, troubled himself about this question. At the same time, I do not think we should drop the matter, and I should like to see some further move on the part of the Association in regard to it.

Although there was a large and enthusiastic meeting in Ottawa last winter re forestry preservation, very little has been done towards furthering this matter. I understand that the Government are endeavoring to get what further information they can on this question, and will, before long, move in the matter.

As you know, a large deputation of lumbermen went before the local Legislature last year re locating of timber lands by bona fide settlers and by the timber thief. This question seems to be in the same position as it was a year ago, and it rests with the meeting whether they think it advisable to move further in the matter.

At the Committee meeting held in June it was decided to change the terms of settlement to 1½% off in 15 days. These terms, I think, have been very generally adopted by the members of the Association, and although there was a good deal of complaint from the customers at first about it, they have now accepted it and the bulk of settlements are being made that way.

There is one question I would like to see this meeting take up—that is, the question of fees. The present fees are a paltry $2 a year per member. This is entirely inadequate for such an association as this, and puts it on a basis with a cheap bicycle club, or associations of that nature. To my mind, an association having the interests at stake that we have should always have a good bank account, so that they can be in shape to meet any ordinary expenditure which comes along. I would suggest that an annual fee of $25 at least be charged every firm. A small fee

might then be charged any extra membership the firm might require for its different members.

The lumber trade lost one of its most important members in the death of Mr. N. Dyment, of Barrie, and I would suggest that the Association extend their sympathy to Mr. Dyment's family in their great loss.

After some discussion, it was decided to increase the dues to $15 so that the Association might be better provided with funds.

The election of officers was then proceeded with and resulted as follows :

President, W. A. Charlton ; 1st Vice-President, W. J. Smith ; 2nd Vice-President, W. B. MacLean ; Secretary-Treasurer, W. B. Tindall ; Board of Management, John Waldie, J. Donogh, W. C. Laidlaw, E. W. Rathbun, J. B. Miller, W. D. Lummis, W. P. Bull.

The President-elect, Mr. W. A. Charlton, here took the chair, whereupon the following resolution in respect to reciprocal demurrage was submitted and unanimously carried :

Moved by W. B. Bull, seconded by W. J. Smith,

Whereas the chief argument of the Railways in support of their demand for demurage charges was the necessity for forcing the prompt handling of railway equipment by shippers and consignees, and that since the adoption of the demurage rules in favor of the railways, the car shortage and irregularities in the movement of freight have increased rather than diminished ;

During the last few months delays in the delivery of lumber from the mills to retail dealers have been so serious as to amount almost to an embargo upon our business, resulting in frequent inability to fulfill our contracts, with consequent loss of business and sometimes in claims for damages against us, and these delays are increasing in extent year by year so that in 1906 at no time were deliveries as prompt as they should have been under normal conditions, resulting in the necessity of ordering stocks far in advance of the time when they are wanted, and requiring a heavier investment than would be indicated by the volume of business ;

This condition, so damaging to the interests, not only of retail lumber dealers but of producers and consumers of lumber, is the result of lack of foresight and proper provision for their future needs by the Railroads, so that their facilities are inadequate to the normal demands under present conditions of population and of industrial and commercial development, and whereas the Railroads, after long delays in delivering cars of lumber to us, demand from us demurrage charge for any detention of their cars above a short fixed period ;

The Railway Act specifically requires railways to supply cars and transport frieght without delay, providing all reasonable and necessary facilities therefor, there appears to be no means at the disposal of shippers to enforce these provisions of t e Act except by action for damages in the Courts, where the individual shipper is at a loss in attempting a fight against the great railway corporations ;

Reciprocal demurrage rules are now in force in the States of Virginia, Louisiana, Mississippi, North Carolina, South Carolina, Texas, Florida, Georgia, Iowa, Kansas, Missouri, Minnesota, Washington and Oklahoma ;

Therefore, be it resolved that the Railroads should pay to us a compensation for undue detention of our property in their possession from point of shipment to our places of business as a just and reasonable measure of reciprocity in the relations of the Railroads to the interest they serve ;

And be it further resolved, that the Board of Railway Commissioners be urged to consider the expediency of adopting some regulations to enforce the Railways to carry out their legal obligations, and to adopt the system of reciprocal demurrage charges in order to force the Railways to supply more cars and locomotive power and thereby relieve the situation which has been so embarassing to the commerce of the country.

During the general discussion concerning the resolution, Mr. J. B. Miller pointed out that the United States courts had awarded damages to a shipper on account of the failure of a railway to furnish cars as required. Several persons cited instances of unreasonable delay in the movement of lumber, cars which were loaded at Georgian Bay points early in January not having reached Toronto until a few days ago. Reference was made to what had been accomplished in some states across the border, where the railways had not only to furnish cars within a specified time, but had also to move them at a rate of fifty miles a day.

Mr. Walsh, Transportation Manager of the Canadian Manufacturers' Association, told of the work of his department in connection with the car shortage and reciprocal demurrage. A protest had been filed last October with the Railway Commission and an answer was expected in the near future. It might be necessary, he thought, to secure amendments to the Railway Act before all that was desired could

MR. E. STEWART,
Who has Resigned as Dominion Superintendent of Forestry.

be accomplished. The railways had to make a complete report to the Railway Commission by March 1st as to their equipment, number and capacity of cars, condition of rolling stock, etc. He believed these statistics would show that, while the railways were short of cars, their greatest need at the present time was more locomotives.

It was decided to have the association represented at the forestry meeting in Ottawa next month.

A resolution was passed expressing the great loss the lumber trade had sustained in the death of Mr. Dyment, of Barrie.

WORTH THE PRICE.

Mr. G. W. Johnson, in remitting his subscription from Chicago, writes : "The CANADA LUMBERMAN AND WOOD-WORKER is worth the price of subscription and I am pleased with it."

The Arcola Lumber Company, Limited, of Regina, Sask., has been incorporated by the Saskatchewan government.

RESIGNATION OF FORESTRY OFFICIAL.

Mr. E. Stewart, Dominion Superintendent of Forestry, has resigned his position for the purpose of becoming managing director of a company which has been formed in Montreal to operate in British Columbia lumber. His resignation will take effect March 1st, after which his headquarters will be in Montreal, though part of his time will be spent in British Columbia.

Mr. R. H. Campbell, Chief Clerk of the Timber and Mines Branch of Department of Interior, has been promoted to the position of Superintendent of Forestry vacated by Mr. Stewart, while Mr. Brown York becomes Chief Clerk in succession to Mr. Campbell.

In Mr. Stewart the Dominion Government loses a valuable official. He first became identified with the Forestry Branch of the Interior Department about seven years ago, and his work since that time has been of the most earnest and practical kind, particularly in the Northwest, where the settlers have given a good deal of attention to the planting of trees. To Mr. Stewart is due in large measure the existence of the Canadian Forestry Association, of which he now has the honor of being president.

CANADIAN MEXICAN STEAMSHIP LINE.

Captain T. H. Worsnop, who is associated with a syndicate of London shipowners, has just completed a contract with the Mexican Government to establish a monthly steamship service between the ports of the Dominion of Canada on the Pacific coast and the ports of Mexico on the same seaboard, which, to be final, only needs to be ratified by the Dominion Government.

The contract just made is for a two years' service. The starting points will be in the Dominion of Canada, being ports in British Columbia, the steamers to call at Guaymas, Mazatlan, Manzanillo, Acapulco and Salina Cruz.

The freight on the steamers bound south is expected to be principally lumber, coal, and coke, and for the northern trip salt, ores, sugar, and tropical fruits.

The steamers which will be employed in the service will have a registered tonnage of about 4,000 tons, and will be equipped both for passenger and freight service.

The steamers which will be laid on for the service will be put into commission at once, to permit them to make the initial trip early in 1907, the starting point being at Vancouver, British Columbia.

Captain Worsnop, who made the contract with the Mexican Government for this important service, was for many years identified with the British mercantile marine, but has been for the past ten years connected with the shipping business of Canada at Toronto.

The Smart-Turner Machine Company, of Hamilton, are supplying the McEachren Heating & Ventilating Company, of Woodstock, with an automatic feed pump and receiver.

F. H. HOPKINS & Co., ...

"Doble" Impulse Water Wheels.

BAND VS. CIRCULAR

A lumber manufacturing firm in Ontario requested The Canada Lumberman to invite the opinions of the lumber trade and sawmill experts on the following question: "Supposing you have to saw 1,500,000 feet of red and white pine logs averaging from 15 inches to 18 inches, and 1,500,000 feet of jack pine logs averaging about 10 inches, which would be preferable to use, a circular or a band saw?"

The answers received are printed below and are, on the whole, in favor of the band. We shall be glad to have the views of others for publication in the April number.

J. B. Miller, Parry Sound Lumber Company: "I would certainly consider a band saw the best for cutting up the three million logs to which you refer. In case a man had to build a mill to cut up three millions, and had no other use for it, he would want to put up as cheap a mill as possible, which would be a circular mill."

Manley Chew, Midland, Ont.: "If the timber was mine I would certainly saw it with a band saw, as there is not only a saving in saw kerf, but the lumber will be much better manufactured, as I claim a circular cannot cut as smooth as the band, and also the circular will draw small logs away from the dogs. With reference to sawing norway with a band, I do not know of any timber that saws more freely, even more so than white pine, as the norway does not choke so easily. My preference for sawing any class of timber is a band rather than a circular."

The John Harrison & Sons Company, Owen Sound, Ont.: "We prefer the band, but cannot say which would be the best in this instance unless we knew location and quantity to be manufactured."

W. J. MacBeth, Toronto: "I would install a circular plant for a stock of this magnitude and smallness of timber for the following reasons, viz., saving in initial cost, and saving in the wage as between a first-class circular saw fitter and band, also saving in the wage of the sawyer. Of course, against this there will be the saving in saw kerf in favor of the band mill, and this saving on logs of this size is not as much as some people imagine. In the larger logs there would be an extra board if every cut were perfect, which is almost impossible with a band saw, which is more prone to make saw culls than a circular. On the smaller logs there would not be any chance to get this extra cut. In short, my opinion is that a circular mill is the more profitable of the two for small timber. Were the logs a large run, I most certainly would advise installing a band mill."

John McGregor, Deseronto: "I assume from the form in which the question is put that the firm in question have equal facilities for sawing these logs, either with the circular or band saw, and if their mill is equipped with both and it is convenient to use both, I would say, use the circular for slabbing in connection with the band, and if a portion of the small logs are to be cut into dimension stuff, such as 2 x 4, 4 x 4, and 6 x 6, etc., the circular could be utilized for that purpose as well as slabbing for the band. If, however, it is convenient to use one kind of saw only, the band on account of its greater economy of material is preferable, and I would advise its use for both the large and small logs. That is my reply to the question asked, but there may be conditions or circumstances in connection with the matter of which I am unaware, and which might make it necessary to modify that reply."

Playfair & White, Midland, Ont.: "We think that a band saw would be the most profitable way to saw the logs you refer to."

Pembroke Lumber Company, Pembroke, Ont.: "It is our opinion that it would be more economical to put in a circular if the quantity to be cut is only three million. If the yearly cut is three million, and would last for a number of years, by all means put in a band saw. No doubt the jack pine logs would be sawn into heavy stock, and the cost of a circular is very much less than a band saw rigged."

J. T. Schell, M.P., Alexandria, Ont.: "If your question were put in two parts as follows: 'Which would be preferable to use if both were installed.' I would say the band saw if sawn into one, one and a half and two inch. In the second place, 'Which would be preferable to install and use,' I would say a circular saw. On that quantity of material the difference in cost of plant and cost of operation in favor of the circular rig would more than offset the saving from loss of saw kerf. I would put up for that class of logs a mill using a saw forty inches, or not over forty-two inches diameter, and nine gauge at eye and ten gauge at rim; speed of saw about 800 to 850. This would stand readily three and a half inch to four and a half inch feed, and the output should be 12,000 feet per day of ten hours average easily, and probably 15,000 feet. In a steam mill this lumber should be put out of mill, exclusive of piling cost, for $1 to $1.15 per 1,000 feet. From my experience, I would calculate as above, and think results would equal, if not exceed, my expectations. If much of it went into two inch and three inch plank it would turn out better."

I. N. Kendall, Ottawa: "In reference to sawing 1,500,000 feet of red and white pine logs, averaging from 15 in. to 18 in., and the same quantity of jack pine logs averaging 10 inches. If this were the entire amount they had to manufacture, I would advise a six-foot band mill."

Booth & Shannon, Biscotasing, Ont.: "We would recommend an eight-foot double cut be quite a saving in the output over that of the circular, and also the manufactured lumber would be more saleable, as with due care it would be better cut. The initial expenditure, of course, would be much more than that of the circular, but a mill of this kind would be saleable at a fair price after being in use such a short time as it would take to manufacture the quantity mentioned."

W. C. Edwards & Company, Rockland: "Unless there are some exceptional conditions which we are not aware of, it would be best to saw the quantity of lumber named by band saw, instead of with a circular."

The Cleveland-Sarnia Saw Mills Company, Sarnia: "Invariably it would be preferable to use a band saw in any case."

The Cook & Bros. Lumber Company, Spragge, Ont.: "Our foreman would advise cutting this lot of logs on a band saw, providing that one saw has to do all the work."

Pedwell & Lemcke, Lions Head, Ont.: "We do not think band saw or circular will prove satisfactory without some kind of gang to take cants. Would prefer ten-guage circular for siding logs, and then have cants put through cluster circular gang, one log at a time. A machine of this kind will take about 1,200 logs per day, of ten hours, and makes extra well cut lumber. Cutting ten-inch logs on band or circular saw would prove a very slow process."

THE TIMBER CONSUMPTION.

A recent report to the Washington Bureau of Manufactures contains some significant figures relative to the consumption of timber in various countries of the world. Great Britain uses annually 430 million cubic feet, Germany requires 325 million cubic feet a year, France and Belgium absorb every year more than 270 million cubic feet. The United States, once regarded as an inexhaustible source of timber, is now obliged to supplement her home supplies by imports from Canada. In spite of the fact that coal has superseded wood as fuel, and that brick, iron, and concrete among other materials have taken the place of timber in many branches of construction, the demand seems to be continually on the increase. In the United States, Germany, and Canada, the State authorities have already taken steps to guard against the depletion of national forests, and reafforestation has been started on a large scale in the United States. Those best qualified to judge are unanimous in the opinion that something like a famine in timber will occur within the present century unless reafforestation is taken up energetically in the chief timber-growing countries. The prospects of comprehensive action in this direction do not seem to be very promising at pre-

THE

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ADVERTISING RATES ON APPLICATION.

THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in every part of Canada in the lumber, wood-working and allied industries. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication in the WEEKLY LUMBERMAN the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN AND WOOD-WORKER is undoubtedly the most direct and profitable advertising medium. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

THE LUMBER COMBINE AGAIN.

A committee of nine has been appointed by the Dominion Government to report on the British Columbia lumber trust. The settlers of the Northwest are averse to paying high prices for lumber, and they had no difficulty in finding an ambitious politician to champion their cause, even on the most meagre information. The scope of the investigation might well have been extended to cover the entire Dominion. Lumber is equally high in Toronto, Ottawa and Montreal as in Winnipeg and the Northwest, and of course a "trust" must be responsible.

Why are white pine mill culls selling in Toronto at $20 when a few years ago they could be bought for less than half that price? Surely the blame must lie in the existence of a gigantic "trust."

Building materials of all kinds must be in the grasp of a "trust" or "trusts" of magnificent proportions, to which we respectfully direct the attention of the Dominion Government.

If high prices of commodities are an evidence of control by a "trust," the number of such "trusts" is legion.

What will the Commission find as the result of its probing of the British Columbia lumber field? It will find, if the investigation is thorough, that the lumber supplied to the Northwest farmer is not high in price in comparison with the cost of production; that the manufacturer is now realizing no more than a reasonable profit; that until two or three years ago there were large investments in British Columbia saw and shingle mills which were yielding no returns; that in Winnipeg to-day prices of lumber are lower than in Toronto; and finally, that there is in existence no combine or trust having for its object the inflation of lumber prices.

The situation in the Northwest for many months past has been such that, had the mill owners chose, they could easily have obtained higher prices for their product. The demand was out of proportion to the supply, and at the present time it is a question where the dry stock for the spring trade is to come from. Notwithstanding these facts, no attempt has been made to obtain more than moderate prices.

The policy of the present Dominion Government has seemed to be antagonistic to the lumber industry of British Columbia, for the development of which nothing has ever been done. If, instead of saddling the country with expense for a useless and unnecessary investigation, the Government would devote some attention to equalizing the tariff on lumber and shingles, they would be deserving of greater commendation.

THE RAILROADS AND THE LUMBER TRADE.

The failure of the railroads to provide adequate transportation facilities for the movement of lumber is probably the most annoying problem with which the lumbermen have been confronted. Its influence is felt from the mill to the consumer, creating difficulties of the most insurmountable kind. The extent of the inconvenience and financial loss that has resulted from this cause is not realized by those whose avocations do not bring them into touch with the situation, but very little investigation will convince the most skeptical that the numerous reports regarding car shortage are more than a myth.

For months past it has been almost impossible to get shipments of lumber from the coast to the East, and the business of Eastern representatives of British Columbia firms has been almost a negligible quantity. Cars loaded with lumber at Georgian Bay points have taken six weeks to reach Toronto. At the annual meeting of the Ontario Lumbermen's Association a member stated that he had applied for four cars for the shipment of hay to his lumber camps, and received two cars after waiting two weeks. Another point brought out was that the cost of loading cars had been increased almost four times as the result of the irregular and inadequate supply. The loss to both shippers and buyers of lumber has been incalculable.

The aggressive steps that have been taken in the United States to bring about an improvement in the transportation conditions give promise of accomplishing a great deal, and in this country there is reason to expect some tangible results from the efforts, chiefly, of the Canadian Manufacturers' Association. Shippers have asked for reciprocal demurrage, a most reasonable thing. A rule that does not work both ways must mean the giving of an undue advantage to someone, and that advantage has been possessed in its broadest sense in the past by the railroads. Demurrage charges have been incurred in many instances as the result of the irregular supply, or "bunching" of cars, and the railways proceed to collect a penalty for an act for which they themselves are responsible.

Two very important decisions affecting the rights of shippers have recently been given in the United States courts. The first, and most far-reaching one, was a suit bought by the Erie Railroad Company to collect $200 as demurrage charges from the Wanaque Lumber Company, the state supreme court giving judgment in favor of the defendant. The lumber company maintained that the charge of one dollar a day for the retention of cars beyond the free time limit was excessive, since the railroads pay only twenty cents a day for the use of cars of other companies. It was also proven that there was serious delay in the delivery of cars that caused unlooked for expense to the consignee, who was obliged to hire extra help in order to unload cars in time to save demurrage charges.

The second suit was brought by the Hoffman Heading and Stave Company against the St. Louis, Iron Mountain and Southern Railway Company to recover damages sustained in consequence of alleged failure of the railway to promptly furnish cars for carrying certain elm logs, the court deciding that the railway was responsible for the damage resulting from such delay.

The above judgments should encourage the Canadian public to fight for their rights at the hands of the railroads. Parliament may have to amend the Railway Act, which makes it all the more necessary that organizations representing every branch of industry should become active in furnishing the Government with evidence of the requirements.

PRACTICAL FORESTRY.

We had a forestry convention in New Brunswick a few days ago, and the annual gathering of the Canadian Association will take place in Ottawa on the fourteenth of this month. These conventions are commendable as a means of disseminating information as to what forestry is and how it can be accomplished. But the public want more than that. Practical demonstrations are needed to encourage the application of the theory.

We cannot express entire satisfaction with the progress that has been made since the forestry question seemingly became recognized a few years ago as a grave national problem. The timber of Canada is being rapidly extinguished, but what are our Governments doing to replenish the supply? We had reason to expect that an example would be set the other provinces by the Ontario Government, but they have evidently lapsed into indifference. To permit the retirement of Dr. Clark, provincial forester, was a retrograde step. By the exercise of diplomacy his services could have been retained, and a more capable and experienced official would be difficult to find. So far no steps have been taken, or at least publicty announced, to appoint a successor. This should be done as quickly as possible and a more aggressive policy pursued in respect to practical forestry.

NEW BRUNSWICK FORESTRY CONVENTION

A forestry convention, called by Premier Tweedie, of New Brunswick, was held at the Parliament Buildings, Fredericton, Wednesday and Thursday, February 20 and 21. The attendance numbered about 200, including a number of prominent lumbermen.

Premier Tweedie occupied the chair, and seated near him were Lieut.-Governor Snowball and ex-Governor McClellan.

In his opening remarks the Premier stated that it was never too late to learn, and the Legislature realizing this, had decided to make changes in the law relating to the timber lands of the province. The forests had in the past been depleted by the wasteful cutting of much valuable lumber, and it was desirable that a change in this direction should be inaugurated. For this purpose the convention had been called. The Premier then read a paper giving a brief and interesting history of the lumber trade in New Brunswick.

Mr. J. D. Hazen, M.P.P., followed, advocating that everything possible be done by statute to protect and conserve our forest wealth.

Hon. A. R. McClellan read a short paper on forestry. He spoke of what was being done in European countries, and advocated a course of study in all the schools that would familiarize pupils with tree culture and its importance to the country.

Mr. Elihu Stewart, of Ottawa, President of the Canadian Forestry Association, read a paper on "The General Need of Forestry Preservation," dealing with the subject in a very practical and interesting way.

In the afternoon the proceedings were opened by Attorney General Pugsley, who pointed out the difficulties that might be encountered in bringing the owners of private lands into line. Dr. C. C. Jones, Chancellor of the University of New Brunswick, spoke on the attitude of educational interests towards forestry. That attitude, he said, should be one of sympathy, and that sympathy should be practical rather than sentimental. He saw no reason why a forest school should not be carried on in connection with the University of New Brunswick.

Mr. J. Fraser Gregory gave a brief practical address of interest to lumbermen. He said the Act relating to surveying was somewhat antiquated. As the representative of one of the most modern mills in the province he found it next to impossible to get from the small logs all that was called for in the scale. It was his opinion that a commission should be appointed to deal with the subject of scaling and make recommendations. He moved that three committees be appointed to consider matters brought up at the convention and submit resolutions.

Mr. W. B. Snowball endorsed the remarks of the previous speaker and also advocated the establishment of forestry schools.

Mr. T. G. Loggie read a paper on the subject of "Forestry Preservation," after which the following committees were appointed:

Committee to consider advisability of forming a forestry association — Hon. F. J. Sweeney, Hon. C. N. Skinner, Hon. J. P. Burchill, David Richards, James Beveridge, C. E. Lund.

Lumbermen's Committee—J. F. Gregory, E. Hutchinson, A. H. F. Randolph, W. B. Snowball, F. E. Sayre, J. D. Buckley, H. Hilyard, Fred. Anderson.

Committee on resolutions — Hon. A. R. McClellan, G. U. Hay, J. D. Hazen, C. M. Leger, Hon. G. F. Hill.

At the evening session Dr. Bailey read an interesting paper on "The Pulp Industry of Canada," from the pen of Prof. Penhollow, of McGill University, illustrated by lantern slides. Hon. Mr. Emmerson, Minister of Railways and Canals, followed, speaking of the connection of forestry with transportation and of the gradual decadence of the timber supply.

Hon. C. W. Robinson gave a short address on lumbering methods, in which he discussed the price of timber lands, and showed where sales had been made in Albert county at the rate of $150 per acre.

In reply to a question whether land burnt over would produce spruce, Mr. Beveridge stated that Norway spruce had been planted and was growing on burnt land at St. Margaret's Bay, N. S.

When the meeting resumed on Friday morning Hon. Mr. Burchill submitted the report of his committee, which recommended that a New Brunswick Forestry Association be formed in affiliation with the Canadian Forestry Association, having for its object the dissemination of information with the view of protecting the timber lands of the province from undue and unnecessary exhaustion.

Mr. H. M. Price, of Quebec, speaking on the lumbermen's interest in the preservation of the forests, said that while New Brunswick had 10,000 of timber lands under license, Quebec had 67,000 miles. He thought the lumbermen should take steps to protect the limits, but it was contended by another speaker that it was useless for lessees to improve their holdings when the Government could cancel the leases at any time.

Other speakers were Mr. William Power, M.P., Mr. James Beveridge, Mr. W. B. Snowball and Mr. A. E. Hanson and Prof. Austin Cary, of Harvard University.

A resolution was carried requesting the Provincial Government to prohibit the exportation of pulpwood. It was also decided to recommend the appointment of a commission to prepare a new act for the survey and exportation of lumber.

At a meeting of lumbermen and others, held after the adjournment of the convention, it was decided to form a forestry association for New Brunswick. Hon. J. P. Burchill presided and Recorder Skinner acted as secretary. A committee composed of J. Fraser Gregory, J. D. Hazen, A. F. Randolph, Recorder Skinner and J. P. Burchill was appointed to draw up a constitution and by-laws, and submit the same to another meeting to be held in the near future.

UNSOLICITED ENCOMIUMS.

The following opinions of the Special Trade Review Number of the Canada Lumberman and Woodworker are appreciated by the publishers:

Merritt & Company, Stratford, Ont.: "Your Trade Review Number is certainly a credit to your company and I am glad to see the letter on slack cooperage by James Innes."

Mr. Wm. Thompson, Orillia, Ont.: "I am sure you are to be congratulated on your Special Trade Review Number, which contains a lot of useful information for the lumber trade."

Mr. E. G. Joly de Lotbiniere, Quebec: "I duly recieved the copies of your special issue of The Lumberman for February, and I take this opportunity, not only of thanking you for the copies, but also of complimenting you on the issue, which is not only admirably well got up, but of the greatest interest to all those who have anything to do with our forests and their exploitation."

Mr. John McGregor, Deseronto, Ont.: I recieved a copy of the special number of The Lumberman and I must say it is certainly a most creditable production and compares favorably with the best of the American publications devoted to the lumber trade. I thank you for the care taken in having the article contributed by me free of typographical errors, in fact the mechanical work throughout seems as nearly perfect as it is possible to get it."

B. Greening Wire Company, Hamilton: "We must congratulate you upon the general appearance of the Special Number."

Clarke Bros., Bear River, N. S.: "We have recieved copy of your Annual Trade Review Number. We congratulate you on getting out one of the best publications which it has ever been our privilege to see. It is admirable from cover to cover and we shall file it away as among our keep-sakes of value."

THE WESTERN MACHINERY E LD.

When speaking to The Canada Lumberman representative in British Columbia recently, Mr. A. B. Cowan, vice-president of Messrs. Cowan & Company, of Galt, Ont., said that since his firm have given up the manufacture of engines some two years ago and gone in for woodworking machinery exclusively, their mail orders alone have doubled in number and value, and the entire business has made rapid strides forward. Referring to his own trip, Mr. Cowan said that the sales throughout the Northwest and British Columbia had never been so good before. The sales on this trip will aggregate about $40,000 worth of wood-working machinery, this being probably the largest amount ever aggregated by one man on one trip in Canada selling wood-working machinery exclusively. Amongst Mr. Cowan's sales were the following: To W. G. Gillet, of Nelson, B. C., a band re-saw and several other woodworking tools; the Mattress Manufacturing Company, of Nelson, a re-saw for bed slats; the Bowman Lumber Company, at Revelstoke, B. C., a re-saw and two 13-inch 4-sided moulders; the North American Land and Lumber Company, at Fernie, B. C., a 4-sided 13-inch moulder, for their mill at Cedar Valley; the Lamb-Watson Lumber Company, at Arrowhead, a large band re-saw; the Carruthers Lumber Company, Cranbrook, another planer and matcher; E. H. Heaps & Company, Vancouver, an order consisting of 10 new tools; the Rat Portage Lumber Company, a 4-sided heavy timber planer, a 13-inch 4-sided moulder, a 15-inch by 8-inch heavy planer and matcher, a heavy power-feed ripsaw, and a large band re-saw, all being for their plant at Harrison River, B. C. This makes the seventh large band re-saw supplied by Messrs. Cowan & Company to the Rat Portage Lumber Company for their different mills. In addition to these sales was the complete equipment of box-manufacturing machinery sold to the Calgary Box Company, a new concern which has been started up in Calgary, Alberta.

WESTREN CANADA

Western Offices of The Canada Lumberman,
615 Hastings Street, VANCOUVER, B. C.; 720-721 Union Bank Building, WINNIPEG, MAN.

WESTERN RETAIL LUMBERMEN'S ASSOCIATION

ANNUAL CONVENTION AT WINNIPEG.

The annual convention of the Western Retail Lumbermen's Association was held in Eureka Hall, Main street, Winnipeg, on the 12th and 13th of February. There was a large attendance of members from Winnipeg, and the Provinces of Manitoba and Saskatchewan. The "Bonspiel" or curling carnival being in full swing at the time, the members had an opportunity of dual participation. The retail hardware men and dry goods merchants also held separate conventions during the same week.

Owing to the delay in trains, the first session on Wednesday morning did not open until 10.30. The members were first registered and given a blue pass ticket, entitling them to a vote in the convention and admittance to the hall.

Copies of the special Trade Review Number of The Canada Lumberman were distributed to all those in the hall, after which President D. E. Sprague took the chair and called the meeting to order.

The minutes of the last annual meeting were read by the secretary, Mr. Isaac Cockburn, and were, on motion, approved.

The address of President D E. Sprague was then delivered, as follows:—

PRESIDENT'S ADDRESS.

By virtue of the honor you conferred upon me at the last annual meeting in electing me as president, it becomes my pleasant duty to welcome you to the sixteenth annual meeting of The Western Retail Lumbermen's Association, and in doing so allow me to express the hope that the members have shared in the general prosperity which has marked the wonderful, though not altogether unexpected, development of this Western country during the past year.

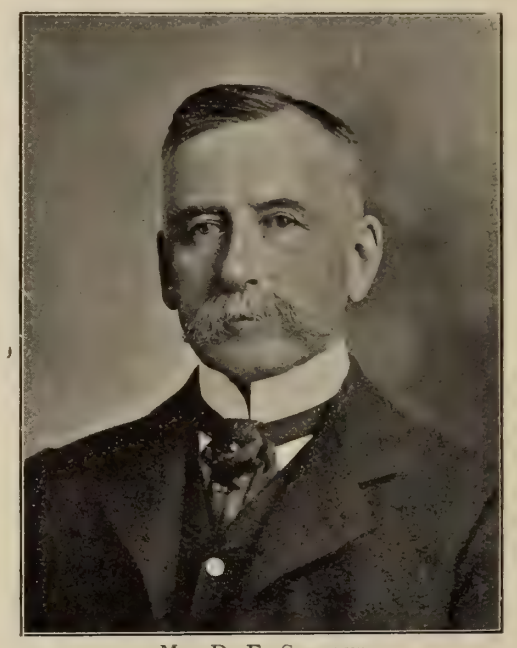
This, the sixteenth anniversary of the organization of the association, at once conveys to our mind the considerable length of time the association has been in existence. I trust its record and the benefits it has conferred upon the retail lumber trade and its influence upon the methods of manufacturers as affecting them, have been of such a character as will after sixteen years' experience justify the founders of its organization.

It may not be amiss in view of the constant admission of new members who are unfamiliar with earlier conditions, to briefly review the circumstances which led to the formation of the association; in fact rendered its organization almost imperative if the retail lumber business was to be placed upon a satisfactory basis and the public furnished the best facilities for procuring lumber, one of the first and probably the most important commodities required by the new settler At this time the demand for lumber was not large, the number of dealers greater than was required to do the business, and as a result, too many ill-assorted and incomplete stocks, customers in many cases financially weak and not able to pay their accounts. Then add to these the poaching or sale by manufacturers to the retail customers direct and you have a condition which existed when this association was formed. In short a business unsatisfactory and often unprofitable alike to the retailer and manufacturer of lumber.

Reasons for Organization.

There were surely sufficient reasons to justify an effort to improve the position of both the interests involved. The association was therefore formed with the object as set out in article Two of the "Articles of Association," as follows:—

"The object of this association is and shall be to secure and disseminate to its members any and all legal and proper information which may be of interest or value to any member or members thereof in his or their business as retail lumber dealers, and the promotion and welfare of the retail trade."



Mr. D. E. Sprague,
Re-elected President of the Western Retail Lumbermmen's Association.

The manufacturers were in sympathy with the objects of the association, realizing that it would tend to improve the financial standing of their cutsomers, the retail dealers, and place the trade generally upon a more satisfactory basis, and theoretically, at least, discontinued to violate one of the universally recognized customs of trade, namely, selling direct to the customers of the retail dealer in the same line and who might also be a customer. I may have occasion to call attention later to their practice as opposed to their theory.

In carrying out the above objects it became necessary to assume control of the territory in so far as accepting membership in the association was concerned; to find out and discharge as much as possible the practice of poaching which had been indulged in by the manufacturers; to foster and encourage a feeling of friendly interest among the members and a better understanding between the dealers in the same localities, or those occupying competing points; to see that an applicant was properly equipped with a suitable stock and other facilities for doing a lumber business, was of good character and had adequate means before his membership became fully recognized; thus securing a high class of men as dealers and providing an adequate supply of lumber to meet the public demand.

Sufficient Quantity of Lumber.

The most important duty, to my mind, undertaken by the association was through its members to provide at all points occupied by members, a sufficient quantity and assortment of lumber to meet the public requirements and if the rules of the association were not violated at a reasonable price, any complaints in respect to either of the above matters always received the prompt and careful attention of the secretary and executive, and if shown to be well founded and not corrected with as little delay as possible, the membership would be cancelled. In this regard the association has been a great convenience and advantage to the purchasing public generally and to the new settlers in particular.

Up to the last year or so, outside of the occasional differences and misunderstandings between members themselves, which claimed the intervention of the executive, and which were in most cases easily and satisfactorily adjusted, the main work of the association consisted in the endeavor to protect its members from the poacher. Some large firms had contracted the habit and it was hard to break them of it, while some smaller ones who did not appear to be governed by any recognized business principles, also indulged in it. This illegitimate competition was not confined to an occasional sale outside the trade, but often in the anxiety to make a sale or secure a customer, someone would be induced to start a so-called independent yard in a locality already amply supplied. There was some excuse for this in the years preceding 1905 and 1906. At that time there was an over-production of lumber both in Canada and the United States, particularly in British Columbia and the State of Washington, and in some cases the sale of lumber may have been imperative, and besides, our members in their desire to take advantage of their opportunities, were not conspicuous for their loyalty to those to whom they should have been loyal.

Changes for Improvement.

This state of affairs existed at the last annual meeting and was, with other matters, made the subject of a lengthy discussion, the result of which was that a committee was appointed to go generally into the working of the association and make suggestions as to the best method of increasing its usefulness and carrying out its object. The committee recommended that the directors be enlarged from six to eighteen, so as to give a director to each line of railway or branch line and each group of yards whose interests would be common. Whose duty it would be to keep in touch with members in his district, call them together when necessary and assist in adjusting any differences or difficulties which might arise. The directors may not have appreciated the importance of their position or the object the committee had in view when the recommendation was made, and therefore have failed in the accomplishment of what was intended. If this be the case, it is not the fault of the plan adopted. The committee also recommended the engagement of a travelling secretary. An exceedingly good appointment to that position was made in the person of Mr. Hay, who was obliged to discontinue his duties owing to ill-health. Subsequently Mr. J. K. Robinson did

excellent service in that capacity. The secretary's report will give more in detail what was done by these officers.

After the last annual meeting the secretary sent out circulars outlining what had been done at the annual meeting and indicating what was contemplated for the future, all of which, together with those sent out during the year, you have no doubt carefully read and have been governed in your actions by what they contained.

Question of the Poacher.

Returning for a moment to the poacher. The conditions which existed in the lumber trade during the last year rendered his operations much less troublesome to the trade than in previous years.

The demand for lumber was during the whole year in excess of the supply, and the manufacturers were in consequence taxed to their utmost to supply the demands of their legitimate cutsomers. The necessity therefore did not exist for them to look for customers outside the trade. The only serious complaints in this regard came from Regina. The matter complained of at that point has been adjusted, but whether to the satisfaction of the dealers at that point will likely develope in the discussion which will no doubt take place during the progress of this meeting.

The lack of transportation facilities operated to the great disadvantage, and often loss, both to the dealer and his customer. Shipments generally were delayed and came in very irregularly, and in some instances the time occupied in transporting cars from the coast seemed to be unreasonably long, but whether the transportation conditions generally justified the length of time taken to perform the service is a matter which is often in argument. In any case I am satisfied that we received a better and quicker service from the coast over Canadian lines than the American roads were able to give their customers. The freight congestion being so general all over the country, and considering the fact that one of the main objects of a railway company is to move freight to its destination and receive payment of the carrying charges, it would seem that there must be some reason not apparent to those who are not experts in railway management and not entirely familiar with transportation conditions to justify to an extent at least the delay in forwarding freight. It must be borne in mind that there is a wide difference between shippers and transportation companies in this one respect. In one case the shipper consults his convenience and orders cars and ships goods when it suits him best; on the other hand, the transportation companies as common carriers are obliged to accept all freight that may be offered by the public without any regard to their convenience and whether or not their equipment, if ever so good, is able to take care of it. So I think we should approach the railways in discussing our grievances in a spirit of fairness and not blame them for what they cannot be made reasonably responsible for.

Reciprocal Demurrage.

At present the reciprocal demurrage question is a matter occupying the attention of both shippers and transportation companies. This is not conceived that the penalty suggested to be imposed upon railways for the non-delivery of cars is a fair one. For this one reason, among others, the case is not parallel as between the parties. In one instance the charge is a fine or penalty and in the other a rental charged by the railroads for the use of equipment held beyond the regulation time allowed for unloading, which time should be reasonable, solely to serve the selfish interests or convenience of the consignee. Three car facilities are too often provided for ten car requirements, and as pointed out above, the merchant orders goods when he wants them and should be able to take care of them upon arrival. The transportation company accepts shipments when offered and should not be penalized unduly for what it may have been impossible to do: viz., to provide for the continuous carriage of a car from point of shipment to its destination in a minimum time.

As you are aware, popular prejudice is directed against all corporations, companies and associations, and many have been and are being investigated. The last to receive attention is the lumber business. I presume the manufacturers will be able to justify their prices and satisfy the committee that they are conducting their business according to law. In so far as the Western Retail Lumbermen's Association is concerned, we can welcome the appointment of the investigating committee, for, as so ably put by my predecessor, J. L. Campbell, in his address at the annual meeting in 1905, in substance as follows: "There is no class of merchants of higher character or who do business upon a closer margin than the retail lumbermen." This has been demonstrated upon more than one occasion. These investigations are a benefit to associations with a proper object, and to companies properly and legally conducted. They remove misapprehensions and correct erroneous ideas regarding the objects of associations and the profits realized by companies and corporations.

Alberta Withdrawal.

Reviewing in a general way what may be of interest to the members, I have to direct attention to the action taken by the Alberta members in withdrawing from the association and forming an association of their own covering the Province of Alberta. An invitation to attend a meeting at Calgary was received by the secretary and he was requested to attend, which he did, accompanied by Mr. McWilliams, one of your directors, who happened to be

Mr. A. M. Stewart,
Secretary-elect Western Retail Lumbermen's Association.

west at the time. The secretary's report will inform you of what transpired at that meeting. Subsequently, on my way home from the coast, I, at the request of Mr. Clark, attended a meeting of dealers at Edmonton, where I had the good fortune to meet with Rev. Mr. Rogers and a representative gathering of dealers. Mr. Rogers and myself endeavored to point out the advantages to be derived from a central association, so that the whole force and influence of an association with a large membership could be enlisted in correcting evils which might exist to the detriment of the retail lumber dealer. Those present seemed to be in sympathy with the views presented to them, but did not appear to correctly understand the effect of what had been done at the annual meeting in enlarging the directorate and appointing a travelling secretary, so that the interests of the more distant members could be looked after, and in view of the fact that the Alberta Association had already been organized and they had largely become members of it, felt like giving the local association a trial. I sincerely trust it has fulfilled their expectations and that it will be able to give them the assistance and protection they are almost sure to need sooner or later, when the interests of the manufacturer and dealer are not so harmonious as at present.

Association for Saskatchewan.

Later in the season an agitation was started in Saskatchewan looking to the formation of an independent association for that Province. The secretary and myself visited Regina at the request of the resident director, Mr. Duncan, and attended the meeting. The response to the call for this meeting did not seem general, as the gathering was small and outside of the resident director and a few of the older members, consisted of some of the newer members, who had not possibly had the opportunity of familiarizing themselves with the objects of the association and did not in consequence fully appreciate its sphere of usefulness, and one or more non-members. A free discussion ensued regarding association matters generally and I endeavored to point out the wisdom of maintaining one strong central organization rather than to split up into several smaller and consequently less influential ones. This view, which I strongly hold, seemed to appeal generally to the members present, although it was urged by some that owing to the distance from the head office their complaints could not receive the prompt attention which is generally essential in order to provide a suitable remedy In order to overcome that difficulty, if indeed it was an objection to the present arrangement, I took the liberty as president of offering to appoint a resident secretary of their own choosing, so that there could be no appearance or suspicion of their interests being neglected. Up to the present time no name has been submitted for the position. Only one specific complaint was put forward at this meeting. The secretary's report may deal with this; if not, it will likely come up during the progress of this meeting. Subsequently another meeting was held at Regina, at which the vice-president and secretary were present, either of whom can explain what transpired at it.

Believes Alberta Mistaken.

I have gone into some details regarding association matters which do not usually find a place in a president's annual address. My excuse is that I appreciate the absolute necessity of maintaining a strong organization, having a large membership and covering as much territory as possible if we wish to retain the influence we now have on the trade and hope to be able to protect our members at a time when their interests are threatened or attacked. While I have nothing but good wishes for the Alberta Association and wish them every success, I am of the opinion that when conditions change in the lumber business, and change they surely will, the Alberta Association will find itself without influence and probably in a worse position than if they had no association at all, the present one being controlled as it probably will be by interests inimical to those of the retail lumber dealer.

I must ask your indulgence while I refer again very briefly to the Regina meeting. The most prominent part of the discussion was taken by a man who was not a member of the association. I presume, however, that he was quite within his rights, as, if I remember correctly, he called the meeting, and who should have a better right to talk at it than himself? Still it did seem somewhat strange to me to see a man who had, whenever opportunity offered or could be made, done all he could to injure the association and its members, advertising in the press that his company did not belong to the association, thus trying to convey the impression that members were bound by iron rules which would not allow them to sell lumber upon as favorable terms as his company.

Not because he was opposed to the association, for he was advocating a local one, but because he hoped by such methods to gain an unfair advantage of his competitors. To hear such a man tender advice as to the administration of the association and criticize its ineffective methods of protecting its members' interests, was at least entertaining. He evidently desired for his company more tangible results than could be obtained through membership in the Western Retail Lumbermen's Association. The wonder to me is that members would listen to him at all.

Trouble Due to One Man.

After considering the matter carefully, and from all the information I have been able to obtain, I have come to this conclusion, that no matter to what extent dissatisfaction prevails in Saskatchewan, it is almost

entirely due to the agitation carried on by this man, and which, if correct, is a reflection upon the loyalty at least of those concerned.

I will not take up much more of your time. There are, however, a few suggestions I would like to make which might widen the scope and usefulness of the association. At association meetings in Minneapolis it is the practice to have papers prepared upon subjects of interest to the lumber trade. These are usually very instructive and profitable. Suggestions along this line have been made in previous years, but the matter has never been seriously taken in hand. It is probably too late to accomplish much this year, but an exchange of views upon such subjects as car weights, the care of lumber, lumber sheds, credits, discounts, the best system to insure charging, efficient collecting, profitable advertising, and many other subjects would no doubt be of interest and profit to all. Addresses delivered by prominent men, either in the trade or other lines, would be a source of pleasure and information at the same time. The opportunity of listening to such an address as that delivered by J. J. Hill before the Northwestern Lumbermen's Association on the transportation problem is one which does not often occur and cannot be too highly appreciated. The address delivered before the same body by Mr. Elliott on car rental, reciprocal demurrage and car shortage, was also full of information and interest. I leave these suggestions for your consideration.

I am pleased to be able to state that the membership and finances of the association are in a satisfactory condition. Statements will be laid before you by the secretary. There was a loss of about seventy-six members in Alberta, but that has been made up by the admission of new members, so that our membership has not materially decreased during the year.

It also gives me pleasure to inform you that the insurance department of the association, a department which not only effects a great saving to the members in reduced fire insurance rates, but also assists largely in maintaining a general interest in the association, has had had a profitable year and promises still greater development for the future.

In conclusion I wish to leave this one thought with you, loyalty to the association. This is an era of big things, big railways, big industrial enterprises, big banks, big commercial houses, big buildings and big mistakes. Do not make one. If you hope to be big you must be united and loyal, secure a big membership and cover a big territory, provide machinery to look promptly after the interests of the most remote member, but above all stick loyally together and you will be big and, being big, can be influential and useful.

I have to thank the secretary for valuable assistance and advice, the vice-president and executive for hearty and loyal support during the year just closed, and would bespeak for my successor in office the same hearty co-operation that has been accorded me in the discharge of my duties as president.

SECRETARY'S ADDRESS.

A practical address was then delivered by Mr. Cockburn, of which abstracts are given below:—

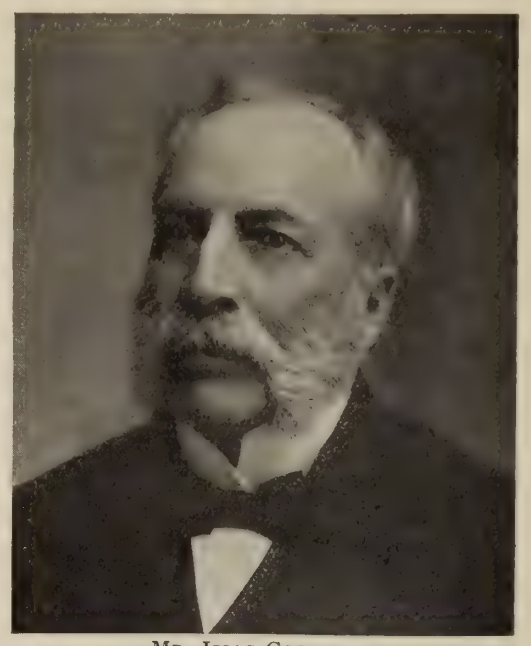
Winnipeg, Feb. 13, 1907.

Mr. President and Gentlemen:—

It is with pleasure that I am privileged to again extend to you a hearty greeting at this sixteenth annual meeting of this association, and it is further a matter of much satisfaction to be able to extend congratulations upon your having had a profitable year's business in common with all other lines of trade and commerce in the expansion and upbuilding of this vast Western country.

The financial report, you will observe, shows an increasing surplus in the assets of this association. There remained outstanding on the 31st December last for dues and fees of the year 1906 the sum of $1,075, of which amount I have received since the end of the year $590, and I expect to largely receive the balance in due course.

Following up the decision reached at the last annual meeting to appoint a travelling secretary, having the duty to visit the entire districts of this association, calling upon the members and attending meetings as required by the directors in their several districts, keeping up a vigorous organization and furthering the interests of the insurance branch, the Executive Committee engaged the services of Mr. R. F. Hay. Mr. Hay proved most satisfactory in his work and very popular with the members with whom he came in contact. Unfortunately, while engaged in his mission he was taken seriously ill in the midst of his work and was compelled to lay off to recuperate, hoping that he would with rest be restored to health and again resume his work. In the meantime I took his place in visiting such places as a desire had been made for the travelling secretary to attend. Mr. Hay finding that his recovery was slower than expected, and finding that he would not be able to continue the work, resigned. Not being able to procure a permanent secretary at that time of the suitable qualification, an arrangement was made with Mr. J. K. Robson to take the work for as long a time as he could be absent from his own business. He continued until the end of August, when he was required to return to his own business. Mr. Robson was also found very suitable for the duty required of him, he having had many years' experience in a successful retail business and



MR. ISSAC COCKBURN,
Retiring Secretary Western Retail Lumbermen's Association.

serving a number of years on the Board of Directors. When Mr. Robson quit I consulted the president, and the fact that we were not aware of any one suitable or available at that time, we thought, considering that the season was becoming advanced, it would be well to forego the engagement of a travelling secretary for the balance of the season. Consequently I held myself ready to attend meetings as asked for, thereby hoping that no inconvenience would arise that would be injurious to the members.

In August last I was informed by Mr. Duncan, of Regina, that he had called a meeting at the instance of some dealers residing in the Western district to take into consideration the advisability of withdrawing from this association and forming a separate one for the Province of Saskatchewan. The president and myself attended. The meeting was thinly attended, and the leading spirit in the agitation was a non-member, Mr. Shields, of the Independent Lumber Company, manager of a line of yards in that Province. He stated the objection he had to his becoming a member of this association was that he desired to establish some yards at points where members of this association had yards established, and he feared the probability of being denied membership therefor. Mr. Sprague addressed the meeting, showing the fallacy of splitting up the association, and urged against the separation, as it would be inimical to the interests of all concerned to divide the influence which they would obtain from a united association. The reasons given for a separation were met by Mr. Sprague by a suggestion that Mr. Duncan form a committee to act with him in adjudicating upon all matters arising and affecting members in the districts tributary to Regina, and that such committee engage a permanent secretary to devote his service to the interest of members within certain bounds, and that the expenses to be incurred be borne from the general funds of the association. The meeting being rather poorly attended and not sufficiently representative, an adjournment was made without any action being taken.

A second meeting was called in September by a circular issued by Mr. Shields, and the notice of the meeting appeared to be very generally addressed to all dealers resident in Saskatchewan. I, along with Mr. Gibson, the vice-president, attended the second meeting, which, like the first, was not very representative, and few of the members attending the first meeting returned to the second meeting. However, there was a pretty good contingent present from the Soo Line and Arcola districts. After the meeting had been called to order by appointing a chairman and secretary, and some discussion on the purpose of the meeting, Mr. Gibson addressed those present, taking the same objections to a separation as advanced by Mr. Sprague at the first meeting, and urged that it would be of much more advantage to all members to be united in one association. In Mr. Gibson's case all his yards were located in the Province of Saskatchewan.

Now, as to the movement then commenced, I am inclined to favor local associations, having a Board of Directors and a permanent secretary appointed by such Board, and whose officer he shall be, and more particularly so in this particular instance, where so many lines of railways are tributary to Regina, and that such local Board adjudicate upon all matters requiring to be dealt with included in the districts as may be defined, but for general effect and organization that it be affiliated with this association. I presume it is still the wish to have a local Board with autonomy centered at Regina for the members in the district on the lines of railway tributary to Regina, and I suggest that it would be a mistake to follow the limits on provincial lines, and that instead it would be much better to have the bounds divided along the lines of railway, which are more immediately tributary to Regina, for instance, the yards east of the main line as far as Whitewood, west on the main line to the westerly limit, the entire Soo line southeast on the Arcola line to Antler, northerly to Prince Albert along the Prince Albert & Regina Railway, westerly on the Canadian Northern from Warman to Edmonton, including all points that may hereafter be located along the C. P. R. branches and G. T. Railway westerly from the Regina & Prince Albert Railway.

Referring to the lien law, I have to report that considerable effort was made to get the law enlarged and extended in both Provinces of Manitoba and Saskatchewan. At the session of the Manitoba Legislature last year a large deputation, headed by our president and attorney, Mr. Hough, waited upon the committee of the House in charge of such legislation, asking that suitable amendments to the Act be made. In this they were met by stern opposition on the part of the loaning societies and others, together with a disinclination on the part of the members to enact such a measure as asked for, and again we were unsuccessful. Perhaps Mr. Sprague will speak of his experience in relation to it.

Mr. Duncan retained a lawyer to endeavor to procure from the Saskatchewan Legislature a lien law suitable to the trade, but found the Government averse to passing an Act to the extent asked for. The Saskatchewan Legislature at the incoming session will be approached for an extension of the Act, so as to make it of service to the trade. In the meantime a legal gentleman has been employed to interview the members individually, so as to explain what is wanted and to get them to look upon it with favor.

Mr. Sprague has read to you from the preamble of the constitution and by-laws in commendation of

the benefits of the association, and I will not repeat it, but add that I think it has been of value from a business point. The local meetings are well calculated to straighten out any misunderstanding that may arise through suspicion of one dealer towards his neighbor, and with explanation a friendly attitude follows with a better understanding.

I thank the president for the very great interest taken by him in the advancement of the association during his term of office, and his good council in dealing with matters, and to the Executive Board and directors for the good part taken by them.

The annual statement of the secretary was then submitted, as follows:—

ANNUAL STATEMENT OF THE WESTERN RETAIL LUMBERMEN'S ASSOCIATION FOR THE YEAR ENDING DECEMBER 31ST, 1906.

RECEIPTS, 1906.

Jan. 1	To balance on hand at 31st December, 1905	$ 2,244.05
Dec. 31	" Mutual Fire Insurance for postage of 1905	15.92
	" Membership fees	2,575.00
	" Annual dues of 1905	1,222.50
	" Annual dues of 1906	1,725.00
	" Rentals for offices sub-let and use of telephone $473.39, McIntyre estate allowance $100, during repairs	573.39
	" Advertisements in membership lists	15.00
	" Business tax on office rents	34.44
	" Interest Mutual Fire Insurance Co., $360; Home Investment & Savings Association, $6.90; National Trust Co., $9.37; Canada Permanent Mortgage Corporation, $9.38	385.65
	" Mutual Fire Insurance Co., for part of secretary's salary	600.00
		$9,390.95

EXPENDITURE, 1906.

Dec. 31	By Travelling expenses	$ 322.45
	" Collection charges	18.85
	" Telegrams and postage	61.71
	" Printing and stationery	231.50
	" Directors' meetings	197.95
	" Expenses auditing in 1905	10.00
	" Annual meeting, hall rent $10, attendance at meeting $6.50	16.50
	" Commercial Travellers' certificate	10.00
	" Premium on treasurer's bond.	11.25
	" Sign painting $2.50, long distance telephone 50 cents	3.00
	" Office expenses, typewriting, telephone, business tax	304.49
	" Office rent	617.90
	" Travelling secretary, R. F. Hay, $658.10; J. K. Robson, $164.05	822.15
	" Director's expenses re meetings	76.00
	" Law costs	80.00
	" Office furniture and fixtures, typewriting machine $112.50; rug and mats, $18.75, library bureau, $45.30; duster and stand, $2	178.55
	" Deposits, Canada Permanent Mortgage Corporation, $450, interest $9.38	459.38
	" Deposits, National Trust Co., $450, interest $9.37	459.37
	" Deposits, Home Investment & Savings Association	1,100.00
	" Secretary's salary	2,100.00
	" Balance on hand in bank	2,309.90
		$9,390.95

ASSETS.

Retail Lumbermen's Mutual Fire Insurance Co.	$ 9,00.00
National Trust Co.	584.93
Canada Permanent Mortgage Corporation	584.45
Home Investment & Savings Association	1,100.00
Cash in Bank	2,309.90
	$13,579.28

We have made an audit of the foregoing accounts of the Retail Lumbermen's Association and certify the same to be correct as therein stated.

D. BOYCE SPRAGUE,
D. SINCLAIR,
Auditors.

A member enquired regarding lumber prices, to which the president replied that it was not the function of the association to make prices, for that would render the association amenable to the charge of being a combine in restraint of trade.

WEDNESDAY AFTERNOON.

The various sections got together in committee in the afternoon under their respective chairmen and held long and vigorous discussions regarding conditions at local points, the feasibility of forming branches, etc. The largest section was that of Saskatchewan, and the line yards along the Arcola branch.

The different sections finished their meetings about six o'clock.

THURSDAY MORNING.

LUMBER INSURANCE SECTION.

Despite the fact that the big Hoo-Hoo banquet was held the evening previous, there was a large attendance at the convention hall when the fire insurance branch went into session. The secretary, Mr. Cockburn, presented the second annual statement for the year ending December 31, 1906, which was as follows:

THE RETAIL LUMBERMEN'S MUTUAL FIRE INSURANCE COMPANY.

STATEMENT OF RECEIPTS AND DISBURSEMENTS FOR YEAR ENDING DEC. 31ST, 1906.

Cash on hand Dec. 31, 1905			$17,856.99
Guarantee Premiums		$ 3,106.55	
Assessments—			
Paid	$ 3,068.36		
Less Re-insured	70.50		
		2,997.86	
Interest		429.26	
			6,533.67
Total Receipts			$24,390.66
DISBURSEMENTS.			
Stationery, etc.		$ 18.60	
General Expense		905.93	
Postage and Telegrams		12.59	
Fire Loss—			
T. L. Arnett	$ 1,950.00		
R. W. Cummings	12.50		
		1,962.50	
Total Disbursements			$2,899.62
Balance in Bank			$21,491.04
ASSETS.			
Canada Permanent Mortgage Corporation (Government Guarantee)	$ 2,690.15		
National Trust Co. (Government Guarantee)	2,690.60		
		$ 5,380.75	
Canada Permanent Mortgage Corporation	12,932.64		
Home Investment & Savings Association	3,177.65		
		16,110.29	
			$21,491.04
Outstanding Assessments		1,974.28	
Office Furniture		16.00	
Total Assets			1,990.28
			$23,481.32
LIABILITIES.			
Western Retail Lumbermen's Association			$ 9,000.00
Surplus			$14,481.32

Winnipeg, Feb. 9th, 1907.

I certify that I have examined the accounts and vouchers and find same to be correct. The Cash in Bank amounting to $21,491.04, as shown above.

D. A. PENDER,
Chartered Accountant.

It was shown that the amount of insurance in force was $625,790.

In the discussion of the report Messrs. Wall, Graham, Estlin, Thomson, Godfrey and others took part. There was a feeling that the maximum might be increased to $5,000 instead of $3,000, as at present.

Of 470 yards, not half, as yet, are members of the insurance department. All the members spoke highly of the benefits of the insurance given, the rates being much less than the usual rates charged on the lowest tariff of the old-line fire insurance companies.

It was voted to ask the Retail Lumbermen's Association for an absolute grant of $5,000 towards the funds of the fire insurance section, Messrs. Crowe, Bettinger and Patton being named a committee to make this request

The following officers were then elected for 1907 by the Retail Lumbermen's Insurance Association:—

President—J. A. Thomson, Winnipeg, (re-elected)

Vice-President—H. Crowe, Winnipeg.

Secretary-Treasurer—A. K. Godfrey, Winnipeg.

Directors—T. L. Arnett, Souris, Man.; J. E. Parrott, Saltcoats, Sask.; W. Sharpe, Moose Jaw; T. B. Patton, Regina; J. C. Graham, Winnipeg; W. T. Bettinger, Winnipeg.

The meeting then adjourned.

THURSDAY AFTERNOON.

The convention opened at 1.30, the president in the chair.

On motion of Mr. J. A. Thomson the reports as read by the secretary were adopted.

Mr. T. L. Arnett, Souris, spoke at length on the absolute necessity of having more educational features attached to the association's benefits. He alluded to the work of the retail merchants in abolishing credit, and he hoped they would follow along these lines and make the association more valuable to the members.

Mr. Estlin also said the association should have more education along the lines of their business.

Mr. Thomson recommended that the secretary attend the annual convention of the

Northwestern lumbermen at Minneapolis, also to invite Mr. Hollis, the secretary of the latter association, to attend the meeting at Winnipeg.

Moved by Mr. Arnett, seconded by Mr. Bettinger, that the thanks of the association be tendered to the president for his able address, and that the address be printed. Carried.

Moved by Mr Arnett, seconded by Mr. Thomson, that appropriate papers be prepared and read at the next annual meeting. Carried.

A communication was read from the Saskatchewan members, asking that a secretary and Board of Directors be appointed for that Province, to deal entirely with local affairs.

Moved by Mr. Bettinger, seconded by Mr. Sharp, that the request of the Saskatchewan members be complied with, and that the directors be instructed to modify the by-laws therefor.

Considerable discussion occurred over this, the consensus of opinion being that Manitoba and Saskatchewan should each attend to their own affairs.

Messrs. Taylor, Sharpe and Crowe were appointed a committee to deal with the question, and the motion of Mr. Bettinger was withdrawn.

Moved by Mr Bettinger, seconded by Mr. Wall, that nine members and the vice-president of the Board be elected for Saskatchewan, and that the question of the secretary and assistant secretary be left to the entire directorate for both Manitoba and Saskatchewan. Carried.

Moved by Mr. Arnett, seconded by Mr. T. Millard, that none but active members be in future allowed to attend the business meetings of this association. Carried.

The appeal to the association by the insurance section for a grant of $5,000 was then discussed by Messrs. Thomson, Arnett, Bettinger, Estlin, Wall, and others.

Moved by Mr. Hanbury, seconded by Mr. Estlin, that this association make a loan to the insurance section of $10,000 at four per cent. until such a time as the reserve of that section reaches that amount, and to be repaid then at the rate of $2,000 per year. Carried.

Messrs. Willoughby, Sharpe, Taylor, Thomson, Crowe and Wall were appointed a committee to nominate nine directors for Manitoba and nine directors for Saskatchewan.

Nominations for president were then called.

Mr R. W. Gibson, vice-president, was nominated by Mr. Sprague.

Mr. Bettinger was nominated by Mr. Thomson.

Mr Godfrey was nominated by Mr. Bettinger.

Mr. Sprague was nominated by Mr. Hanbury.

Mr. Sprague at first declined the honor, but finally agreed to allow his name to stand.

Scrutineers were appointed, and the result gave Mr. Sprague a majority of the votes cast.

W. W. Davidson, Moose Jaw, Sask., was nominated for vice-president, and elected unanimously.

The following members were unanimously elected as directors for the following year:—

DIRECTORS FOR SASKATCHEWAN.

Regina—T. B. Patton and L. P. Stranahan.
Moose Jaw—G. B. C. Sharpe.
Sintaluta—A. McKinny.
Weyburn—Jos. Mergens, Weyburn.
Arcola—J. J. Stevens, Tyvan.
Prince Albert—W. C. Moore
Kirkella—W. D. Stacey, Balcarres.
Estevan—A. H Foulds, Carnduff.

DIRECTORS FOR MANITOBA.

Winnipeg—A. K Godfrey, W. J. Bettinger, and H. Crowe.
Holland—T. Millard.
Miami—A. N. Shaw.
Souris—T. L. Arnett.
Binscarth—F. McPherson.
Crystal City—Geo. Robertson.
Gladstone—Geo Barr.

The convention was then addressed by the president, after which it was declared adjourned until next year.

MR. J. A. THOMSON,
Re-elected President Retail Lumbermen's Insurance Association.

THE ATTENDANCE.

Fully one hundred members were in attendance, but as some did not register their names are not given.

Quite a large number of visiting wholesalers, mill men, salesmen, supply men, etc., were on hand, renewing old acquaintances, and booking orders

The following is a copy of the official register:—

D. N. McMillan, Brandon.
Alan M. Stewart, Winnipeg.
H. M. Klassen, Hebert.
D. W. Jones, Roland.
W. D. B. Boyd, Roseisle.
W. C. Thorburn, Broadview.
T. Millard & Son, Holland.
A. E. Downey, Swan Lake.
J. A. Thompson, Winnipeg.
J. A. McBride, Weyburn.
M. J. Waller, Weyburn.
T. F. Schindler, Watson, Sask.
A. Schindler, Weyburn.
W. J. Robertson, Cartwright.
J. R. Hooper, Canada Lumberman.
T. L. Arnett, Souris.
J. C. Graham, Plum Coulee.
P. McGillivray, Winnipeg.
H. S. Y. Galbraith, Winnipeg.
J. E. Parrott, Saltcoats.
D. E. Fraser, Kenton.
J. A. Decasse, Somerset.
Jas. A. Bradley, Emerson.
L. Marks, Plum Coulee.
D. Fraser, Letellier.
R. A. Knight, Hargrave.
Joseph Baril, St. Jean Baptiste.
Ephrem Marion, St. Jean Baptiste.
Alfred Nurse, Lanigan.
Jos. Mergens, Weyburn, Sask.
C. A. Gingras, Winnipeg.
Chas. Willoughby, Regina.
T. E. Maxwell, Grand Coulee.
W. A. Wilson, Regina.
J. H. Young, Winnipeg.
G. T. Anthony, Winnipeg.
D. E. Sprague, Winnipeg.
Alfred B. Estlin, Melita.
W. K. Cherry, Waskada.
T. B. Patton, Regina.
H. Wingate, Winnipeg.
Barwark Harvey, Qu'Appelle.
J. J. Henslip, Alameda.
Geo. Barr, Gladstone.
M. J. Bettinger, Winnipeg.
J. H. Jones, Rosebank.
A. H. Foulds, Carnduff.
A. McKinney, Sintaluta.
G. H. Wall, Winnipeg.
Thos. Taylor, Boisevain.
L. P. Stransbow, Regina.
F. J. Gubb, Moose Jaw.
John D. Stevenson, Tyvan.
D. Russ, Neudorf.
F. M. Morris, Belle Plains.
A. Jameson, Sedley.
C. S. Adamson, Winnipeg.
T. A. Cuddy, Winnipeg.
Daniel Knos, Neudorf, Sask.
J. A. Robson, Treherne.
E. W. Sharpe, Moose Jaw.
W. F. Ramsay, Killarney.
James A. Ovas, Winnipeg.
Jos. M. Hall, Winnipeg.
T. H. Patrick, Souris.
H. Crowe, Winnipeg.
A. and L. Mennardy, St. Pierre.
W. C. Carruthers, Crulivar.
J. A. Thompson, Winnipeg.
R. F. Hay, Winnipeg.
R. J. Gourley, Winnipeg.
I. McCollum, Winnipeg.
F. R. Inman, Western Can. Contractor.
Halland Cornelinson, Starbuck.
W. R. Chandler, Winnipeg.
Frank R. Shortreed, Tantallon.
N. W. Honbury, Brandon.
E. Wankel, Oak River.
John Hanbury, Brandon.
W. M. Stewart, Manly, Man.
A. B. McPhillond, Winnipeg.
M. J. Mallon, Weyburn.
J. A. Badgley, Emerson.
Heward Harvey, Qu'Appelle.
C. McKinney, Sintaluta.
W. H. Grubb, Moose Jaw.
W. Hopkins, Buchanan.
W. W. Davidson, Moose Jaw.
A. Tenneson, Sedley.
F. W. Scott, Winnipeg.

THE NEW SECRETARY.

Mr. Alan M. Stewart, the newly-appointed general secretary for the Western Retail Lumbermen's Association, is a resident of Winnipeg, and very popular among his fellow-lumbermen and those who know him. He was born at Chiltern-Canfield, Somersetshire, England, in the year 1864. He came to Manitoba in 1883, and started in the lumber business in 1895. From 1898 to 1902 he was a member of the Executive Board of the Western Retail Lumbermen's Association. In 1902 and 1903 he was elected vice-president of the latter association. In 1903 he sold out his business to the Canadian Elevator Company of Winnipeg, and in 1904 he joined the Prairie Lumber Company of Winnipeg.

Mr. Stewart, with his wife and family, have been resident in Winnipeg many years. THE CANADA LUMBERMAN extends to Mr. Stewart its congratulations and best wishes upon assuming his new duties.

THE HOO-HOO "ROUND-UP" AT WINNIPEG

The convention of the Western Retail Lumbermen's Association at Winnipeg was made the occasion of a general "round-up" of all the old cats and stray kittens in the Northwest.

Despite the fact that the concatenations at Nelson and Chatham took in many members, it will be seen by the list of candidates at Winnipeg that some came from British Columbia and some from Ontario, as well as the Northwestern Provinces.

The number put through at Winnipeg was thirty-three—all of them strictly entitled to membership as devotees of the Great Sacred Black Cat.

The "Session on the Roof" was a splendid affair, and reflected the utmost credit upon those in charge of the midnight ceremonies.

A real goat was provided for the candidates, and the novel initiation was a revelation to the many visitors from St. Paul and Minneapolis.

The following officers took charge of the ceremonies:—

Snark—Jas. A. Ovas.
Senior Hoo-Hoo—E. D. Tennant.
Junior Hoo-Hoo—W. K. Chandler.
Custocation—A. B. McClelland.
Arcanoper—R. G. Jones.
Bojum—H. S. Y. Galbraith.
Scrivenoter—Jay Spencer.
Gurdon—Dan. McDonald.
Jabberwock—D. B. Sprague.

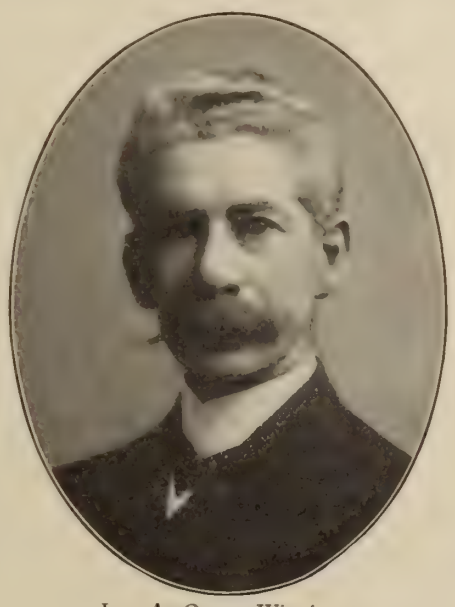
Among those present and assisting in the work of initiation were the following "old Tom cats":—

Stanley L. Raymond, Winnipeg; W. K. Chandler, Winnipeg; D. J. McDonald, Winnipeg; T. Millard, Holland, Man.; A. H. Foulds, Carnduff, Sask.; E. D. Tennant, Winnipeg; James A. Ovas, Winnipeg; W. B. Nelson, Winnipeg; Robert G. Jones, Winnipeg; D. Boyce Sprague, Winnipeg; A. Harry, Methven, Man.; P. H. McIntosh, Winnipeg; Jno. A. Telfer, Portage la Prairie, Man.; J. A. Playfair, Baldur, Man.; A. B. McClelland, Winnipeg; Jay Spencer, Winnipeg; D. W. Morton, Winnipeg; Geo. H Anthony, Winnipeg; W. L. Ramsay, Killarney, Man.; H. Springate, Winnipeg; J. H. Jones, Rosebank, Man; T. L. Arnett, Souris, Man.; J. C. Graham, Winnipeg; H. S. Y. Galbraith, Winnipeg; W. J. Robertson, Cartwright, Man.; Alvin K. Godfrey, Winnipeg; John H. Young, Winnipeg; A. L. Preston, Winnipeg; E. A. Holston, Duluth, Minn.; M. M. Boyd, Winnipeg; J. R. Hooper, Winnipeg; E. R. Birnie, Nelson, B. C.; C. F. Taylor, Kenmoire, N. D.; Chas. W. Bready, Winnipeg; A. C. Smith, Winnipeg; Chas. Espey, Winnipeg; A. McKinney, Winnipeg; J. J. Shotwell, Brandon, Man.; J. D. Kennedy, Winnipeg; F. McPherson, Binscarth, Man.

After the initiatory ceremonies, and before the banquet, the best vaudeville features from the Dominion and Bijou Theatres were put on the stage of Eureka Hall. The actors and actresses came from the theatres after filling their parts there and entertained the assembled Hoo-Hoo. Round after round of applause greeted the clever work of the artists and added much to the occasion.

The following is a list of the candidates who received the Biographical Degree of the Black Cat:—

List of candidates—Levi Pembroke Stranahan, general manager Saskatchewan Lumber Company, Regina, Sask.; Alfred (Poet) Tenneson, Tenneson Bros., lumber dealers, Sedley, Man.; Arthur Josiah Mott, Elk Lumber Company, Fernie, B. C.; Joseph A. Montjoy, Montjoy & Glover, lumber dealers, Heward Sask.; Frederick Morley Morris, lumber dealer, Belle Plaines, Sask.; Robert Lloyd Scott, coast buyer Mack Lumber Company, Vancouver, B. C.; William Stanley Brock, manager J. C. McLaren Belting Company, Winnipeg; George Arthur Lee, general agent Chicago, St. Paul & Milwaukee Railway, Winnipeg; Robert Francis Bingham, retail lumber department Canada Elevator Company, Winnipeg; Percy Crannell McGillivray, manager Mack Lumber Company, Winnipeg; John James Stevenson, manager Dwyer-Stevenson Lumber Company, Tyvan, Sask.; Joseph (Spruce) Mergens, manager Canadian Lumber Company, Weyburn, Sask.; Wilfred (Highholder) Hanbury, salesman Hanbury Manufacturing Company, Brandon, Man.; James Edward Dougherty, travelling agent Soo Line Railway, Winnipeg; Thomas Brown Patton, manager Regina Lumber & Supply Company, Regina, Sask.; James A. McBride, Weyburn Lumber Company, Weyburn, Sask.; Walter Claude Thorburn, lumber dealer, Broadview, Sask.; Carroll Johnson McCollum, president Mack Lumber Company, Winnipeg, Man.: Stephen Walter Tanner, salesman E. A. Holston Sash & Door Company, Winnipeg; George Laurie Andrew, salesman Rainy River Lumber Company, Rainy River, Ont.; Malcolm Craig McInnes, salesman Empire Sash & Door Company, Winnipeg, Man.; Thomas Evard Maxwell, Maxwell & Ferguson, Grand Coulee, Sask.; Frank R. Shortreed, lumber dealer, Tantallon, Sask.; Douglas (Canuck) McNicol, traveller Beaver Lumber Company, Winnipeg; Dominick Daly Ryan, salesman McDonald-Dure Lumber Company, Winnipeg; James William Ackland, manager D. Ackland & Sons, Limited, wholesale hardwood lumber, Winnipeg; Louis (Germany) Marks, Marks Lumber Company, Plum Coulee, Man.; Donald (Poplar) Fraser, lumber dealer, Letellier, Man.; Albert (Minnesota) Schoeuleben, manager Weyburn Lumber Company, Weyburn, Sask.; David Wesley Jones, retail lumber, Roland, Man.; Robert Henry Hamlin, manager Empire Sash & Door Company, Winnipeg; Reginald Arthur Knight, lumber dealer, Hargrave, Man.; William (Stumps) Stubbs, salesman J. C. Graham, Limited, Winnipeg.



JAS. A. OVAS, Winnipeg,
Vicegerent Snark for Central District of Canada.

SAWDUST BRIQUETTES.

We are always glad to welcome any movement which tends to the utilization of those industrial by-products which, though unavoidable, must be dealt with not infrequently at considerable inconvenience and cost. The LUMBERMAN will be glad of any suggestion which would tend to make a marketable product of that bete-noir of his work, the sawdust, for which he has no use, and no market, and which in consequence accumulates on his hands until it becomes a serious drawback.

The Standard Fuel Manufacturing Company, Limited, of Halifax, N. S., are utilizing a patent in which sawdust is combined with certain by-products, left in the distillation of coal tar, and compressed into briquettes, forming what they call "The Ideal Firelighter", or perhaps better defined as the "Ideal Firekindler." In the manufacture of these briquettes, creosote salts, otherwise known as anthracine crystals, which are the sediment left after the distillation of creosote from coal tar, are mixed with a proportion of pitch, in a tank heated by steam, where it liquifies; it is then flowed into a second tank, where it is immediately mixed with sawdust. The product is then fed to a press which compresses it into blocks. The blocks, which are rectangular, with openings to allow the passage of air, harden on leaving the press, and are then packed for the market and sold at a reasonable price.

Since starting, the company have had no difficulty in finding a market, and are contemplating a considerable increase in their plant, and consequently of their powers of production.

The Measurement of Sawlogs

Orillia, February 10th, 1907.

Editor CANADA LUMBERMAN:

Dear Sir,—Since Dr. Clark's article on the above subject appeared in THE LUMBERMAN of last September, I have given the article and the subject a great deal of thought, and have been waiting for some person to make some reply to it. But as I stated in my article in your February number, "very few seem to take that interest in the measurement of sawlogs that the importance of the subject demands."

I think it expedient that some notice be taken of the article, for were it to pass unchallenged, the author might reasonably claim that he had solved the much-vexed question of "log-rule," and had attained that eminence upon which he could unfurl his banner and proudly emblazon upon it "Eureka."

Dr. Clark starts out by decrying the "non-progressiveness" of the English-speaking people in the matter of weights and measures, and claims his contention is more than sustained concerning the measurements of sawlogs and other round timber.

If we go back to the "Origin of Standards," we find that absolutely invariable standards have, however, never yet been, and in the very nature of things cannot be attained; while to secure exactness a vast amount of scientific research, ingenuity and labor have been expended.

The history of the steps taken to define definite and national standards by the English people in 1736, and then in later years to establish accuracy, will be enough to show they had attained a satisfactory basis upon which to calculate weights and measures.

Quite a number of years after, the French turned their attention to establishing a standard, and gave the world the "Metric system."

The English arrived at their standard from experiments conducted by George Graham, who determined the length of a pendulum, vibrating seconds of mean time in the latitude of London, at a temperature of 62 degrees F., in a vacuum, at the level of the sea, to be in the then unit of measure 39.13 English inches.

The French, from a very accurate survey of an arc of the meridian between Dunkirk and Barcelona, found the "metre" or unit of length to be 39.37 inches.

The same result, within a fraction, arrived at in two different countries in two different ways, which to any ordinary mind shows conclusively that the first obtained was practically and scientifically correct and needed nothing further or "progressive" along this line.

Now, sir, has there been "non-progressiveness concerning the measurement of sawlogs and round timber?

From the very fact (which the worthy doctor admits) that there are 40 different log rules in existence to-day, goes to show there has been at least attempts made at progressiveness, and undoubtedly a vast amount of thought, labor and ingenuity devoted to the subject.

If there has been "non-progressiveness," as Dr. Clark terms it, it is because practical men have long ago recognized the fact that no absolute correct rule can be determined. Could this have been done, the doctor must not flatter himself for a moment that it would have been left till to-day for him or any one else to discover it; for many good and practical men have given the subject a vast amount of thought and attention, together with experiments which only established the fact that the present state of things could not be improved upon.

As in the "Origin of Standards," in order to define and express the measure of a quantity of any kind, they had to find in nature, or assume arbitrarily, some standard with which it may be compared—so in order to define and express the measurement of sawlogs, we must find from the actual sawing into lumber of logs of various dimensions, or assume arbitrarily some basis upon which to calculate the contents.

I am not conversant with the history of the 40 odd different log tables in existence; but to me the "arbitrary assumption of a basis of calculation" seems to solve the problem of the "amazing diversity" in the different scaling scores.

Dr. Clark says: "Millmen, mathematicians and others have from time to time endeavored to compute log rules which would forecast with accuracy the lumber product, etc.," and goes on to say, "with all the great variety there is no satisfactory log rule before the public, but it remains for the forester to compute a fair rule, etc."

I do not see on what ground "the forester" can presume to claim superiority over the worthy men who have preceded him, and am not aware that he has any monopoly of the wisdom floating around in this world of ours, and would ask him, is it not just as possible, and just as probable, for these men to compute an accurate and satisfactory log rule as "the forester," and are not their's just as worthy of acceptance as his, and has he not added another of these "unsatisfactory" rules to the already big list?

Dr. Clark gives his formula upon which he makes his calculation—an arbitrary assumption already referred to.

Why the diversity of the "scaling scores," and no two of the tables produced alike? One uses one formula and another a different one (both arbitrarily assumed); one allows so much for saw-kerf, waste in edging, and a certain thickness of the lumber; and another varies from these, and a multiplicity of reasons arise as to the diversity in the calculations.

When a mathematician, forester, or any one else starts out to produce a new log rule in his mind all the rest are unsatisfactory, and he is determined to have something different to what already exists, and though he makes tests and experiments, he will undoubtedly create a rule different to all others, for this is what he set out to do.

Scribner claims his results are derived from accurately drawn diagrams for each and every diameter of log. Here is a definite statement of how he arrives at results, and while it is not from actual sawing, yet it appears reasonable and practical and therefore worthy of acceptance and consideration. And as I have said before, I believe for sound timber, Scribner is the fairest and most equitable rule in use to-day and comes nearest to the actual contents when sawn into inch boards.

In your September issue you give a log rule promulgated by the Forest Service of the United States Department of Agriculture, for Southern hardwoods, based on an actual sawed product of 4,329 logs. A great percentage of these logs were cut into thick stuff, and therefore no fair test, so we cannot accept this as absolutely correct or satisfactory.

Dr. Clark says: There is no allowance made for the natural taper in the scaling scores, and gives a case of a 40 foot stick 6 inches in diameter scaled by Doyle, and gives the contents as 10 feet board measure. This is misleading, and the worthy doctor is either woefully ignorant and knows little about the system of scaling in Ontario, or he is deliberately trying to bolster up his argument by a misrepresentation.

Every practical man in Ontario knows that timber 20 feet and over in length is scaled butt and top diameter, and the average taken to half inches. Now, a stick 40 feet long 6 inches diameter at the top will average at the least 8 inches (the doctor's own admission of 1 inch taper for every 8 feet lineal), which according to Doyle would be 40 feet for that particular stick. So his increase of 400 per cent. dwindles down to about 37 per cent.

When a person has no case he usually resorts to misrepresentation, which shows the weakness in the arguments adduced.

It is all very well to propound and advance theories, but what counts, and what we demand and must have, to carry any weight, is hard, practical every-day experience. I have found after 38 years of service in scaling logs and inspecting and shipping lumber, that for our defective timber in Ontario the Doyle rule gives more satisfactory results than could be obtained from any other, and this is proven by the fact that this rule is the one in most general use to-day. And if there were a change to-morrow there soon would be some one writing about the dissatisfaction of the same, as is said to exist over the Doyle rule.

Why all this dissatisfaction and what causes it? It is largely due to those who have an "idea" of their own about a "log rule," and are not satisfied till they have figured it out and have it foisted upon the public, and chasing around with the object of creating more or less agitation.

A few years ago I was one of a party deer-hunting, and at breakfast one morning one of the crowd asked me to go with him to a certain place and we would be sure to get a deer. He was no bushman and I asked him if he knew where the place was; he said he had "an idea." I told him I was not going to chase his "idea" around the woods all day and so I did not go.

So if the lumbering fraternity were to chase around the different ideas and theories about log rules set forth every once in a while, they would soon get muddled and become unfit to associate with their fellow-man, and the Government would have to build a refuge for "batty or bug-house" lumbermen, and erect a wall around it higher than any skidway ever built in the woods, and the chief occupation of the inmates would be, each fellow would be armed with a log rule of his own particular fancy and chasing his companions around, trying to convince them that he had the only absolutely fair, correct and satisfactory rule made.

We hear a lot about "the over-run of the lumber over the log scale." I cannot agree with our worthy friend and benefactor to the lumber trade, Mr. Baughman (in the production of his excellent book, "The Buyer and Seller") that the "over-run" is one of the reasons for non-progress in the use of log rules. My answer to this must be what I said in a former part of this article re "non-progressiveness," and I will also say that the greater percentage of the "over-run" is not the fault of any particular rule, so much as the fault of the culler. As I dealt with this particular phase of the question in my article, "Culls, Cullers, Culling," I will not repeat it here; but assert what I have said before—a culler who understands his business can make as fair and equitable a scale with the Doyle rule as any other; and in Ontario timber it has given fairly accurate results and been very satisfactory.

I have known of stocks scaled by Doyle to have been short when sawn into lumber. No "over-run." Was it the fault of the rule?

Two years ago I and the most experienced and practical culler in Michigan were engaged (he for the buyer, I for the seller) to inspect a stock of 93,000 logs in the water. The wood scale by Doyle was 92 feet per log; they were an exceptionally faulty lot. Neither one tried to get any advantage of the other, but both of us used our best endeavor and brought all our experience to bear to get a fair and equitable scale with the Scribner rule; and these logs when sawn into lumber were 4 feet per log short of our scale, which was 82 feet per log. Here was an actual product of 14 feet per log short of the wood scale per Doyle rule, although sawn in a band saw mill. Whose fault in this case? And where would the buyer have been had the logs been scaled by the international rule? Now, sir, I know from actual tests made 25 years ago in a circular sawmill, cutting one-quarter inch kerf, that logs 36 to 40 inches diameter scaled by Doyle, the sawn product was short on one log I remember 39 inches diameter 110 feet, and yet Dr. Clark in his international log table gives for this parcular log 55 feet more than Doyle.

I say this without fear, favor or affection; that it is a piece of presumption to set forth the claim that he has "computed a rule that is equally fair to buyer and seller, and submits it to the public as be-

ing in advance of any previous effort''; and he has no right to ask that it be adopted, as it is not adapted to the conditions existing in this country, where there are so many variations in the thickness of saws used; and moreover, the system he advocates for scaling with his table, viz., the placing of the 0 point at greater or less distance from the 1 inch graduation in the stick, as the case may require, is not feasible by any means, and is one of the most nonsensical propositions ever made in reference to log scaling.

It is all very fine for mathematicians, foresters or any one else to sit in a cosy office and on a comfortable chair and in quiet and seclusion, assume some arbitrary rule and figure out a log table and assert that the others in existence are unsatisfactory and that his is the one that is ''in advance of any previous effort.''

But, sir, the test of the pudding is in the eating of it.

The experienced and practical culler who goes to the woods in the fall, climbs over hills and rocks, sleeps in a bed of hay or balsam brush; in the winter tramps in snowshoes for miles through the forest and over frozen lakes, works all day around the skidways, no matter how cold, and conscientiously scales logs day in and day out, and then in the summer goes to the mill and in roasting weather inspects and ships lumber, keeps tab on how his logs are cutting out and the quantity and quality of the lumber produced and how it cuts out with his wood scale, no matter with whose or what ''rule'' he scaled the logs; his knowledge and experience is of vastly more importance and carries far more weight, and he knows far more about ''over run,'' ''actual product'' and the need of ''progressiveness,'' than the forester who sits in his comfortable office and never suffered the extremes of heat and cold, or received his knowledge (only theoretical) inside college walls.

I must call the attention of readers to Dr. Clark's article, where, in speaking of the ''effect of Major Crook on the product of sawn lumber.'' He quotes from the rules of the National Hardwood Lumber Association, and says ''the minimum dimension of a board to pass inspection is 4 feet long 3 inches wide,'' and goes on to say that for his purposes of calculation he uses a minimum unit of just twice that size.

Thank him for nothing for his liberality. I happen to have before me those same rules of inspection, and this 4 feet 3inch board goes in No. 3 common. He might as well tell us that in figuring the sawn product from our logs we should count in the culls. Why not be fair?

We lumbermen are very sceptical when we find any one misquoting or misrepresenting facts, and we not only require a grain but a mighty big handful of salt to take in his claim that he has attained the ''*Ne plus ultra*'' or produced something which is ''in advance of any previous effort.''

I think I am perfectly within the mark when I say that 90 per cent. of the logs in Ontario are scaled on skidways in the woods, and anyone who is conversant with the work knows that a large percentage of the defects are not seen, in fact from the very nature of things cannot be seen. In nearly every case a log with two sound ends is taken for granted as good, and more especially so when covered with snow. But take and pass those same logs through a jack to scale them in the water, or load them on cars, or as they come up into the mill, where each individual log can be plainly seen, and then you will find 50 per cent. more defects than were ever noticed in the skidways. Here is where Doyle comes to our aid with its ''over-run'' and with its help our wood scale will give fairly accurate results. But where would we be with the international?

The futility of all this agitation about unsatisfactory log rules must be apparent to all practical men. It has no effect, and we have had Doyle in use in Ontario for over 25 years and giving satisfaction in most cases and fairly accurate results.

I have no practical knowledge of the working of the Quebec, New Brunswick and British Columbia rules, but by comparing them with Doyle and Scribner I believe they are fairly within the mark where the timber is sound, and would not be afraid were I called upon to do so, make a fair and equitable scale as between buyer and seller; but I am sure of this, that in our defective Ontario timber, they would not give the general satisfaction Doyle does.

I have not heard anything of the Ontario Government having any idea of making a change, and don't believe there is any likelihood of it taking place. If they were to hint of such a thing the Minister of Lands and Forests would be besieged by a host of those ''log rule calculators,'' each claiming he had the only fair and satisfactory rule, and wanting a bonus for its adoption.

I cannot see where there would be any advantage to any one concerned in a change. I do not think the Province would realize any more by way of ''bonus'' or in the amount of dues collected; for the purchaser of limits would figure according to the rule to be used in scaling; and the scaler would have to ''knock off'' more for defects for the ''International'' than he would for ''Doyle'' or Scribner.''

What is all this agitation for? Of what benefit?

It perhaps causes some of us to think and study more over sawlog scaling and kindred work, and when we go to the woods concentrate our energies more upon our work and make tests and calculations as to the relative merits of the claims put forth by the agitators. If it will in this way help to make a better class of cullers and give our employers more confidence and satisfaction in us and in our work, then it will have accomplished something.

Trusting I have not wearied my readers or taken too much of your valuable space, I remain,

Yours truly,

B. F. Kean.

LUMBER CONDITIONS OF THE INLAND EMPIRE.

By August Wolf.

Spokane, Wash, March 2nd, 1907.—One billion feet, board measure, was the lumber output in the Inland Empire in 1906. The Inland Empire, of which Spokane is the hub, is composed of nearly 150,000 square miles in eastern Washington, southern British Columbia, northern Idaho and northeastern Oregon. The increase over 1906 is placed at 250,000,000 feet, and prominent lumbermen in the district are of the opinion that 1907 will show relative advances over 1906, as the last season did over 1905.

With the enlargement of mills and the establishment of new ones in southern British Columbia, and the improvements in equipments, will come an increase in the year's production. New capital is pouring into all parts of the Inland Empire, and, of course, the boundary country is sharing in this.

While the exact figures of the cut in the southern part of British Columbia have not yet come to hand, there is every indication it was between 125,000,000 and 150,000,000 feet, and it is predicted that with the completion of the Vancouver, Victoria & Eastern railway the output will be doubled in a short time. Spokane men have made large purchases of timber lands in the Kootenay and other districts and official announcement is made that mills will be opened as soon as the machinery can be assembled.

The total output of lumber in the state of Washington in 1906 exceeded the 4,000,000,000 mark, while the shingle cut is placed 2 per cent. higher than in 1905, when 10,500,000,000, or 68.8 per cent of the total production of the United States was reported. Six hundred million feet of lath was produced, this being estimated to be 20 per cent. of the total cut of the country, or 2 per cent. more than a year ago. Oregon's output is estimated at 2,000,000,000 feet in 1906, as against 1,262,000,000 feet in 1905 and 1,000,000,000 the year before. Idaho produced more than 250,000,000 feet in 1906, against 197,000,000 feet in 1905, while Montana's cut was around the 200,000,000 mark, as against 189,725,000 the year before. The figures do not exclude poles and ties.

Estimates by lumbermen place the cut of 1906 at a higher figure than that in 1905, when 11,666 mills produced 30,502,961,000 feet. Statistics at hand show that Washington, Oregon, Idaho, and Montana supplied more than one-fifth of the lumber of the United States to domestic and export trade.

Census returns place the total value of the lumber cut in the United States in 1904 at $435,708,084, while that of 1905 was $475,000,000, and returns so far at hand indicate it was near the $500,000,000 mark in 1906. From this it may be taken that the lumber value in Washington was more than $60,000,000, or nearly $100,000,000 if the value of shingles and lath are taken into consideration.

An idea of the output of the State of Washington may be gained by showing that in 1905 the 427 mills in the State cut 3,125,325,000 feet of Douglas fir, or 72.4 per cent. of the total output, while Oregon, with 281 mills, had an output of 1,076,695,000 feet, or 24.5 per cent. Sixty-four mills in California put out 100,816,000 feet, 2.3 per cent., and 24 other mills cut 16,643,000 feet, or .4 per cent. Forty-two mills in Washington cut 84,773,000 feet, or 3 per cent. of the hemlock, and 70 mills produced 179,864,000 feet or 15.4 per cent. of spruce, and 109 mills cut 217,074,000 feet, or 22 per cent. of the western yellow pine, other States in the northwest making this showing: Montana, 19 mills, 101,998,000 feet, or 10.3 per cent.; Oregon, 44 mills, 84,955,000 feet, or 8.6 per cent.; Idaho, 46 mills, 83,640,000 feet, or 8.4 per cent.; and California, 110 mills, 363,932,000 feet, or 36.8 per cent.

BRITISH-AMERICAN LUMBER AND TRADING COMPANY.

The British-American Lumber & Trading Company, Limited, is the name of a new company recently organized in the province of British Columbia for the purpose of manufacturing and wholesaling all kinds of forest products, both rail and cargo shipments. The stockholders of the company consist of men already prominently identified with the lumber industry in Canada and the United States. The management of the new company has been entrusted to Mr. J. R. Owens, a young man who has been connected with the lumber business on the coast for the past eight years, with the exception of one year spent in Minneapolis with the W. I. Carpenter Lumber Company, and last year in New York City with the J. C. Turner Cypress Lumber Company. While on the coast, prior to his engagements with the above mentioned companies, he was vice-president of the Eclipse Lumber Company at Everett, Wash., and coast buyer for the W. I. Carpenter Lumber Company.

The company have also retained the services of Mr. J. B. Ferguson, formerly with the Fraser River Sawmills, Limited, at Millside, B. C., who is now calling upon the lumber dealers of the Prairie Provinces in the interests of the British-American Lumber & Trading Company.

PERSONAL.

It is reported Mr. R. Marpole will be appointed to take charge of the Canadian Pacific Railway Company's land and timber interests on Vancouver Island.

Mr. Thomas Bayles, who operated a sawmill near Greenwood, Ont., was killed on February 2nd by a pile driving machine falling on him.

Mr. J. E. Maines, proprietor of a sawmill at Ashda, Ont., was struck in the head by a flying board, and received injuries from which he died.

The death occurred at Whitney, Ont., on January 25th, of Mr. James H. Anderson, who for many years held a responsible position with the St. Anthony Lumber Company.

Mr. John Macleod, who for a number of years was associated with his brother, the late Angus Macleod, in the lumber business, died at his home at Bracebridge on January 27th.

Mr. William Archibald, of New Westminster, B. C., died on February 1st after an illness of several months' duration. The late Mr. Archibald was for many years a millright in the employ of the Royal City Mills.

Mr. John C. Kennedy, Crown Timber Agent at Pembroke, Ont., died on February 11th after a lengthy illness. Deceased was born in Scotland and came to Pembroke in 1852, having been in the employ of the Ontario Government for 31 years. He was a most faithful and energetic official.

THE NEWS

ONTARIO.

—Mr. L. Boyd has disposed of his sawmill at Belmont to Mr. Hamlin of London.

—The business of the Lake Superior Timber Company, Port Arthur, has been sold.

—Mr. F. Stanton has succeeded Mr. J. Stanton as proprietor of the saw mill at Elgin.

—Brown & Company have acquired Johnston & Company's planing mill at St. Marys.

—Arrangements are being completed for the erection of a pulp mill at Dryden, with a saw mill in connection therewith.

—Mr. Geo. Hunt, of Ruscomb, has so'd his sawmill to Murphy & Strong, but will continue to operate his planing mill.

—Mr. J. V. Eitle, of Niagara Falls, has decided to erect a small planing mill in connection with his contracting business.

—Messrs. Smith & Tree, proprietors of the Mimico lumber yard, M mico, have recently erected an addition to their saw mill.

—McLachlin Bros., of Arnprior, are improving their sawmill by the installation of eight new boilers, giving them 2,000 additional horse-power.

—Messrs. A. Barr and J. L. Morris, C. E., have purchased a sawmill at Pembroke. The new owners will improve the mill and enlarge its capacity.

—Mr. J. R. Newman, son of Mr. John P. Newman, of Wiarton, Ont., in company with Mr. Roberts, his uncle, will shortly establish a planing mill in Toronto.

—A huge piece of timber was recently brought in to the Keenan Woodenware Co.'s factory at Owen Sound by Mr. W. J. Goodwin. It was a soft elm log and scaled 5,263 feet.

—Messrs. Galbraith & Airths, successors to Rhodes & Galbraith, Chatsworth, Ont., expect to cut this year between 7,000,000 and 8,000,000 feet. They are installing a new boiler supplied by the Goldie & McCulloch Company.

—A Dominion charter was recently granted to the Ottawa Cobalt Mining & Lumber Company, Limited, of Ottawa. The incorporators of the concern are: H. H. Lang, A. A. Taillon, J. U. Vincent, J. A. Corry and G. P. Brophy, all of Ottawa. The authorized capital is $250,000, divided into shares of $100 each.

THE EASTERN PROVINCES.

—The new sawmill of the Inglewood Pulp & Paper Company at Musquash, N. B., has been completed.

—Mr. D. F. Maxwell, C. E., has decided to erect a sawmill at Plaster Rock, N. B., on the Tobique river.

—The Union Boom Company are seeking incorporation through their solicitors, Barnhall, Ewing & Sanford, St. John, N. B.

—Jas. Burgess & Sons, lumber dealers, of Grand Falls, N. B., have formed a joint stock company and have been incorporated as Jas. Burgess & Sons, Limited, with an authorized capital of $60,000.

A. H. Cummings & Son, of Coaticook, Que., manufacturers of lumber and builders' supplies, have been incorporated by the Dominion Government as A. H. Cummings & Son, Limited. The capital is fixed at $140,000.

—A new sawmill is to be erected at Beaupre, Que., by the Bayless Paper & Pulp Company, of Binghampton, N. Y. The site selected by the company is a very good one, being situated at the dam on the St. Anne river, where a spur line from the main line of the Q. R. L. & P. Co is built.

—Damage to the extent of $3,000 was done by fire to the dry kilns of the Tobin Manufacturing Company, Bromptonville, Que., recently. Mr. E. W. Tobin, head of this concern, is also President of the Lotbiniere Lumber Company, whose mill was destroyed by fire some time ago and which has been rebuilt.

—It is announced that several changes will shortly be made in the personnel of the well-known lumber firm of Dobell, Becket & Company, of Quebec. The report states that Mr. L. Evans, of Quebec, and T. Stephenson, of London, England, are to retire, the business to be carried on by the sons of the two founders of the firm.

—R. G. Haley, H. W. Gross, J. W. Vanwart, all of St. John, N. B., and J. L. Peck and W. M. Steeves, both of Hillsboro, N. B., have applied to the New Brunswick Government for incorporation as the Hillsboro Hardwood Flooring Company, Limited. The company propose to carry on business as timber merchants, sawmill proprietors and manufacturers of hardwood flooring, with an authorized capital of $30,000.

—The Montreal Wood Mosaic Flooring Company, Limited, is the name of a new concern established at Montreal, which has recently been incorporated by the Dominion Government. They are authorized to manufacture all kinds of wood-flooring, wood mosaic and the materials therefor. Among the incorporators are A. M. McLean, lumberman, of Buffalo, N. Y.; C. Stuart, merchant; R. W. Barclay, manager, and D. H. McLennan, merchant, all three of Montreal.

MANITOBA, SASKATCHEWAN AND ALBERTA.

—Tomlinson & Mitchell have started a lumber business in Winnipeg.

—Mr. G. L. Stone has purchased Mr. W. G. Shank's lumber yard at Pettapiece, Man.

—The Rat Portage Lumber Company have just completed and moved into fine new offices.

—S. Q. O'Brien, lumber dealer, of Strathcona, Alta., has been succeeded by Sache & Walter.

—Bond Bros., dealers in lumber and implements, Lavoy, Alta., have been succeeded by Bond Bros. & Co.

—Messrs. Partridge & Gilroy, of Summerberry, Sask., lumber dealers, have opened a branch at Govan, Sask.

—The Provincial Lumber Co., Limited, Lethbridge, Alta., have appiled for a change of name to the Provincial Lumber and Manufacturing Co., Limited.

—Mr. J. W. Mohler, of Ohaton, Alta., lumber merchant, has sold out, while Mr. D. N. Hart has commenced in the same line of business in the same village.

—The Sprague Lumber Company, Winnipeg, have removed to a more central position, having taken a fine office in the basement of the Bank of Ottawa on Main street, Winnipeg.

—Mr. R. T. Jephson, late of the firm of Chataway & Jephson, Winnipeg, has just returned from surveying timber limits on Lake Winnipeg. Mr. Jephson will shortly open an office in Brandon, Man, where he will carry on a general surveying and civil engineering business, Mr. Chataway carrying on his usual business in Winnipeg.

—The McCutcheon Lumber Company, Limited, with head office at Minitonas, Man., was recently formed by A. N. McCutcheon, of Winnipeg, W. J. Osborne, J. Street, S. La Belle and R. G. Bertram, all of Minitonas. The concern is incorporated by the Manitoba Government to carry on business as general dealers in lumber and contractors' supplies, with an authorized capital of $50,000.

BRITISH COLUMBIA.

—Grant & Kerr have sold their saw mill situated at Ladner.

—A sawmill has been established at Vernon by Mills Bros.

—Shannon Bros. have purchased the sawmill heretofore operated at Okanagan Landing by Manning & Bruce.

—The saw and planing mills at Vernon, which for some time have been operated by Mr. S. C. Smith, will hereafter be run by the S. C. Smith Lumber Company, Limited.

—The City Building Inspector, of Vancouver, recently issued a permit to the Hastings Shingle Manufacturing Company for the erection of their new mill, which is to cost $25,000.

—The agents of the Canadian Pacific Railway have been instructed by the Land Department of the Company not to sell any more timbered land in the Penticton district.

—The City Engineer of Vancouver, has recommended that the City Council purchase a portable sawmill at an estimated cost of from $7,000 to $8,000, to cut certain timber on city property.

—The Victoria Lumber Company are opening up a new camp near Union Bay in addition to the two camps operating above Courtney. The company recently purchased two locomotives, which will be used for working these three camps.

—It was stated in a daily paper that the Rat Portage Lumber Company are this year installing a new plant at Harrison, B. C., at a cost of $100,000. We are advised by the President, Mr. D.C. Cameron, that the cost will amount to over $300,000.

—Extensive additions are being made to the plant of the A. J. Burton Saw Company at Vancouver. A new building 48 x 130 feet is being erected, part of which will be used as a general office. A large amount of new machinery is being installed and the total cost of the improvements is estimated at $25,000.

—An association is being formed in British Columbia the membership of which will consist of saw mill men, loggers, timber cruisers, speculators, and capitalists, and the object of which will be to protect the interests of all timber owners in the province. Steps will also be taken to secure the establishment of a system of protection against fire in the woods.

—Two new saw mills are now being erected on the southern shore of False creek. Eastern capitalists are financially backing one of the companies, whose mill will have a capacity of 100,000 feet per day, part of the plant having been secured from the old saw mill of the Forbes Vernon Estate, the remainder of the equipment coming from a mill on Malcolm Island. The other mill, which will have a capacity of 60,000 feet per day, is being built by Messrs. Telford & Flader, two Eastern lumbermen.

—E. H. Heaps & Company, of Vancouver, have let the contract for the supply of machinery for their new mill to the Prescott Company, of Menominee, Wis. The equipment will consist of three band mills, two band resaws, two gangs, two edgers, a 50 foot slasher, two automatic trimmers and other modern appliances. An automatic sprinkler system will be installed throughout the mill, which will be capable of handling logs 10 feet in diameter and 110 feet long. The planing mill and sash and door factory will also be equipped with the most up-to-date machinery, and large dry kilns are now in course of erection.

—The Jervis Inlet Lumber Company, Limited, is the

Saw Mill at Rainy Lake, Ont. Yards and Planing Mill at Hamilton, Ont.
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HAMILTON, CANADA

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name of a new company incorporated in October last, with head offices in the Inns of Court building, Vancouver, B. C The personnel of the company consists of Dr. George E. Davenport, of Vancouver, manager, Mr. Charles J. Pike, Havergal, New Hampshire, vice-president, and Mr. J. McQuillan, Vancouver, secretary-treasurer. The Jervis Inlet Lumber Company own about 20,000 acres of timber limits on Jervis Inlet and Gilford Island. The timber on the Inlet consists chiefly of fir and cedar, while that on Gilford Island consists of spruce, larch and cedar. These limits are especially good, having been acquired some time ago when good timber land was more easily obtained than it is now. The company commenced logging operations this winter and will dispose of their logs to the mills in and around Vancouver. Later on, however, they purpose erecting a large mill of their own for the manufacture of lumber cut from their limits.

—The mill of the British Columbia Tie & Lumber Company at Seal Harbor is nearing completion. This company have contracted with Wallace Bros. for the supply of a tugboat 87 feet long having an 18 foot beam.

—Mr. C. Killam, of Killam & Farris, solicitors, of Vancouver, recently appeared before the Burnaby Municipal Council in an endeavor to secure foreshore rights for a client who intends erecting a large sawmill on the south shore of Burrard Inlet.

—Extensive improvements and additions are to be made shortly to the plant of the A. R. Rogers Lumber Company at Enderby. The mill will be overhauled and new planing and lath mills and a box factory erected at a cost of $65,000. It is also the intention of the company to erect a burner.

—The British Columbia Mills, Timber and Trading Company are about to erect a mill at Burnaby Lake which will have a capacity of 40,000 feet per day. The equipment will consist of a double Pacific Coast edger and resaw driven by electric power supplied from the Vancouver Power Company, to the amount of 250 horse power. It is expected that it will take about four years to clear the standing timber.

ATKINS' SOUVENIR BOOK.

Messrs. E. C. Atkins & Company, Incorporated, Indianapolis, Ind., have issued an Anniversary Souvenir Book in commemoration of their fiftieth birthday. The book is entitled "The Saw Its Ancient and Modern Development", and is dedicated to their clients whose confidence in and loyalty to the Atkins product has made possible their success. We do not think we have ever seen a more complete and artistic work. Typographically it is perfect. The illustrations include portraits of Mr. E. C. Atkins, the founder of the business, Mr. Henry C. Atkins, Mr. Nelson A. Gladding, and the officers, directors, superintendents, salesmen, and some splendid views relating to saw making.

In issuing the book Messrs. E. C. Atkins & Company call attention particularly to the fact that in many respects it is not an advertisement, but rather a text book or treatise on the saw, and they have endeavored to make it so perfect from each different standpoint that it will become a part of the library of all who receive it.

The following is an extract from one of the pages:

"Primitive water power saw mills were erected in Germany as early as 1322. These mills were very simple affairs, merely the adaptation of power to the saw pit. In 1663 an attempt was made to erect one of these mills in England, but was abandoned owing to the opposition of the hand sawyers. One hundred year later a mill was erected only to be destroyed by a mob.

"But the time was at hand when ignorance and superstition could no longer withstand the progress of civilization, and in 1790 the great inventor Brunel invented the circular saw.

"Probably the inventor of this type of saw did not realize that for ages the world had been preparing herself for a period of wonderful development and that the saw was one of the necessary means for that development; that, while her storehouses were being filled with the raw material, minds that had been trained for centuries by the struggles and the searching for light of her leaders in thought and action were ready for the final touch of the Supreme Mind that would equip them for the important part they were to take in the world's awakening. Brunel's mind had been trained to invent. Others were being trained, not only to invent, but to organize, develop, and bring to the highest standard of efficiency the work so well begun by him.

"For a number of years after Brunel's invention little progess was made in the development of the saw, but the man of the hour was being raised up.

While Brunel was inventing the circular saw Thomas Atkins came to America and settled in New England. He possessed in a large measure the indomitable will and sterling qualities of the early pioneer.

"From his son Benoni was descended Rollin, the father of Elias C. Atkins, the founder of the business of E. C. Atkins & Company, of Indianapolis, Indiana, U. S. A., to write the history of whom is to write the story of the development of the modern saw."

Then follows an intsresting sketch of the life of Mr. E. C. Atkins and the growth of the Atkins firm.

The concluding chapter says: "From an humble beginning in 1856 the business has grown to be one of the greatest of its kind in the world. Atkins saws are known all over the globe. The policy of the founder and his dealings with the trade are perpetuated by the present management, being of such a character that "Atkins" has become a synonym for quality in saws and integrity in business dealings."

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NEW and Re-laying from 12 to 60 lbs. per yard with fastenings; for Lumbering, Mining and Contracting Work. Also about 25 tons of good second hand Boom Chain 5/8" and 3/4". Immediate shipment.
Get our prices before purchasing.
SESSENWEIN BROS., Montreal

W. L. HASKELL, Manager.
FRED T. SMITH, Sales Manager.

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Band Sawed Hemlock, Spruce, Pine, Basswood, Birch, Oak, Butternut, Maple, Cedar and Ash Lumber, Lath and Shingles

SPECIALTIES: **Hemlock, Spruce and Pine Timbers**

We own and operate the Salmon River & Northern Railway, which delivers our logs direct to mill [no logs being floated] and enables us to furnish special length timbers promptly at any time of year.

Saw Mills and Planing Mills located on C. P. R. and Ottawa River 70 miles west of Montreal

FOR THE CAMP

WE have a very suitable lot of goods for Camp Supplies. We make this kind of trade a specialty. You who are not getting suited just as well as you would like, try us for your next order, and give us a chance to demonstrate our ability to give you satisfaction in this very important department of our business.

H. P. ECKARDT & CO.

Wholesale Grocers - - - TORONTO

OBITUARY.

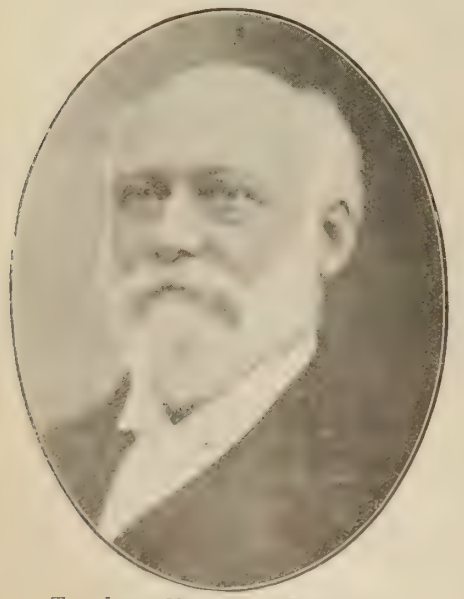
HON. J. B. SNOWBALL.

Hon. J. B. Snowball, Lieutenant-Governor of New Brunswick, dropped dead on Sunday, February 23rd, while on his way to attend service in the cathedral at Fredericton, N. B. The previous night he entertained at state dinner at the Queen's Hotel, where he had made his home during the session.

Hon. Jabez Buntin Snowball was born in Lunenburg, N. S., in 1837. his father being Rev. John Snowball, Methodist minister. He graduated from Mount Allison College, where he was educated. Then he went to Chatham with his family from Newfoundland, and became interested in general store business with John Macdougall, and later entered into the fishing and lobster business as well as lumbering. Some five years ago his lumbering business was formed into a joint stock company, known as the J. B. Snowball Company, Limited, which is one of the largest lumbering concerns in the province, cutting 30,000,000 feet of lumber annually.

As a railroad builder, Mr. Snowball, with Alex Gibson, built the Canada Eastern Railway, which was sold two years ago to the Intercolonial Railway.

Hon. Mr. Snowball first offered himself for federal political honors in 1874 and was defeated, but at the next election was successful. In 1892 he became senator, and on February 5, 1902, he was sworn in as



THE LATE HON. J. B. SNOWBALL.

Governor of New Brunswick. He acted as inspector of savings banks at Chatham; consular agent for France on the Miramichi; president of St. George's Society, as well as taking an active interest in militia matters. He was captain of a company that was under arms at the time of the Fenian invasion in 1866.

He was twice married, first to Miss McDougall, and second to Miss Archibald of Scotland. By his first wife he leaves two sons, McDougall Snowball, of Pasadena, California, and W. B. Snowball, of Chatham. By his second wife, who survives, he leaves one son, R. A. Snowball, of Chatham, and three daughters, Misses Frances, Lillian and Laura Snowball.

HUGH. C. SALMON.

Mr. Hugh C. Salmon, head of the Salmon Lumber Company, of College street, Toronto, died February

THE LATE MR. HUGH C. SALMON.

24th at his home, 448 Euclid avenue, after an illness of some weeks.

The late Mr. Salmon was born in Yorkshire, England, in 1842, and after his arrival in Toronto was connected with a rolling mill, subsequently associating himself with the contracting firm of Withrow & Hillock. Twenty-two years ago he formed a partnership with Mr. Joseph Watson in a lumber business on College street, under the name of Salmon and Watson, and after the latter's retirement the name was changed to the Salmon Lumber Company. For over twenty years the late Mr. Salmon was Treasurer and a trustee of Broadway Tabernacle. He was a man of sterling qualities and very much respected. A widow and a grown up family survive.

PUBLICATIONS.

We are indebted to the Rice & Lockwood Lumber Company, of Springfield, Mass., for a neat memorandum book with calendar.

Catalogue No. 17 has been issued by the Marine Iron Works, designers and builders of special marine engines and boilers, marine machinery, etc., Chicago. Any one interested in this line will find the catalogue very instructive.

The Gordon Hollow Blast Grate Company, Greenville, Mich., are distributing some very attractive blotters, on which they call attention to the Gordon hollow blast grate, the "Tower" two and three saw edgers, and the "Tower" trimmers.

The Michigan Sprocket Chain Company, of Detroit, are manufacturers of a most complete line of detachable sprocket chain, riveted drive, pintle and carrier chains, log haul-ups, sprocket wheels, clutches, etc. These are illustrated and described in their general catalogue No. 5, just issued.

ERRATA.

Reference was made in the February number of the CANADA LUMBEMEN AND WOODWORKER to some results accomplished at Victoria Harbor in November last in the direction of quick loading of lumber. Owing to an oversight, the name of the shippers of this lumber was given as Pitts & Charlton, instead of J. & W. A. Charlton, the firm of Pitts & Charlton having been dissolved in 1905.

In the advertisement of the B. Greening Wire Company, of Hamilton, Ont., which appeared in our Special Trade Review Number, the words "saw carriage works" should have read "saw carriage ropes."

PLEASED WITH IT.

Mr. W. E. Gunther, St. John, N. B., writes: "I am pleased with the CANADA LUMBERMAN AND WOODWORKER; it contains very much that is beneficial to me."

The Simonds Canada Saw Company are having installed at their works in Montreal a large producer gas plant, consisting of two independent units of 300 b.h.p. each, both having independent cooling and scrubbing apparatus, but discharging into one large gas-holder of the gasworks type. For some time back the company have been using a 50 b.h.p. suction gas producer with great saving and satisfaction to all concerned, hence the enlargement of the plant. The plant is of British manufacture, and was supplied by the Producer Gas Company of Toronto, who state that they are looking forward to installing several other plants of this type.

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"We first began using cypress exclusively for Greenhouse Construction in 1885, using it previous to that time in conjunction with pine. The greenhouses built with clear cypress free of sap twenty-one years ago are being used to-day by their owners, and the wood is found perfectly preserved and free from any decay or rot."

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NOTES.

Mr. John Collins, a fitter in the Seaman-Kent saw mill at Dyers' Bay, had his left hand caught in a "kicker" and badly crushed.

Mr. T. Millette, an employee of the Eastern Land & Timber Company at Corris, Que., recently met with a serious accident which necessitated the amputation of his right arm.

Mr. Charles Wurn, an employee of McLachlin Bros., of Arnprior, Ont., received injuries from which he died on February 19th.

J. A. and J. J. F. Winslow, of Fredericton, N. B., have acquired a controlling interest in the McFarlane-Neill Manufacturing Company, of St. Mary's, manufacturers of lumbermen's machinery and tools. Mr. A. A. Tweedale will continue to act as manager and Mr. Edward Winslow, late of the Bank of Montreal, will be assistant manager.

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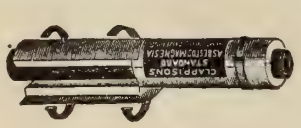

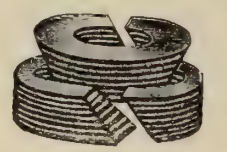

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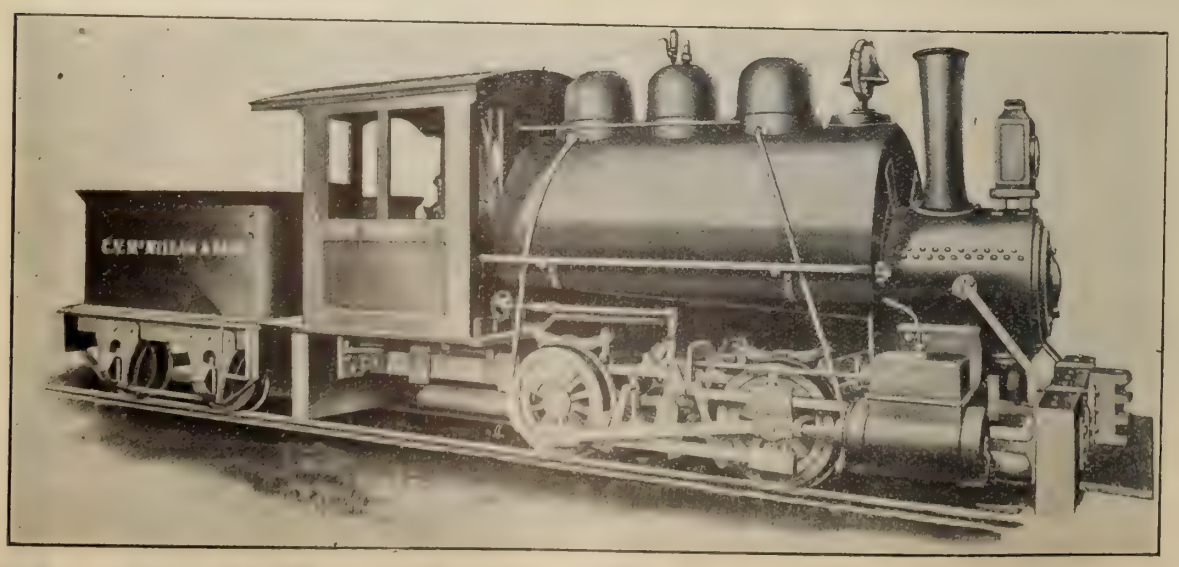

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CALCULATING BOARD MEASURE.

JANUARY 22nd, 1907.

EDITOR CANADA LUMBERMAN:

DEAR SIR,—In your January issue there is a short art cle on the editorial page headed "calculating board measure mentally," in which you quote a writer in "The Tradesman". This writer cl'ims to show the advantages of mental calculation as applied to lumber measurements. He says: "For example, if the stick is 2 x 4 and 14 feet long, in one linea foot there are 8 inches, which is ⅔ of a foot, and in the whole length 20/3, which is 6⅔ feet". The writer then proceeds to show the advantages of calculating in this way over the one usually employed, viz., multiplying the length, width and thickness together. Now if the above is a fair sample of his "mental calculation" I would advise him to stick to the orthodox method, as in the simple little sum above quoted his figures are wrong, there being 9⅓ feet in a 2x4x14. Exactitude is something to be aimed at in the measurement of lumber and for the ordinary individual I fancy a pencil and paper or a shingle will be found good enough and more likely to give accurate results than "mental calculation." Here is a simple way of figuring which is doubtless used by many, but as there may be others who do not employ it I subjoin it for their information. For example:—

50 pcs. 2x4x12 equals 400 ft. B. M.
50 " 2x4x13 " 400 plus 1/12=433⅓ ft.
50 " 2x4x14 " 400 " ⅙=466⅔ "
50 " 2x4x15 " 4 0 " ¼=500 "

and so on.

For 16 ft. lengths add ⅓, for 18 ft length add ½, for lengths under 12 ft deduct in the same way, thus; for 11 ft. lengths deduct 1/12, for 10 ft. lengths ⅙, for 9 ft. lengths ¼ &c.

Yours truly,

"LUMBERMAN".

Hon. John Sharples, of W. & J. Sharples, one of the largest lumber firms in Quebec, has been elected President of the Union Bank in succession to the late Andrew Thomson.

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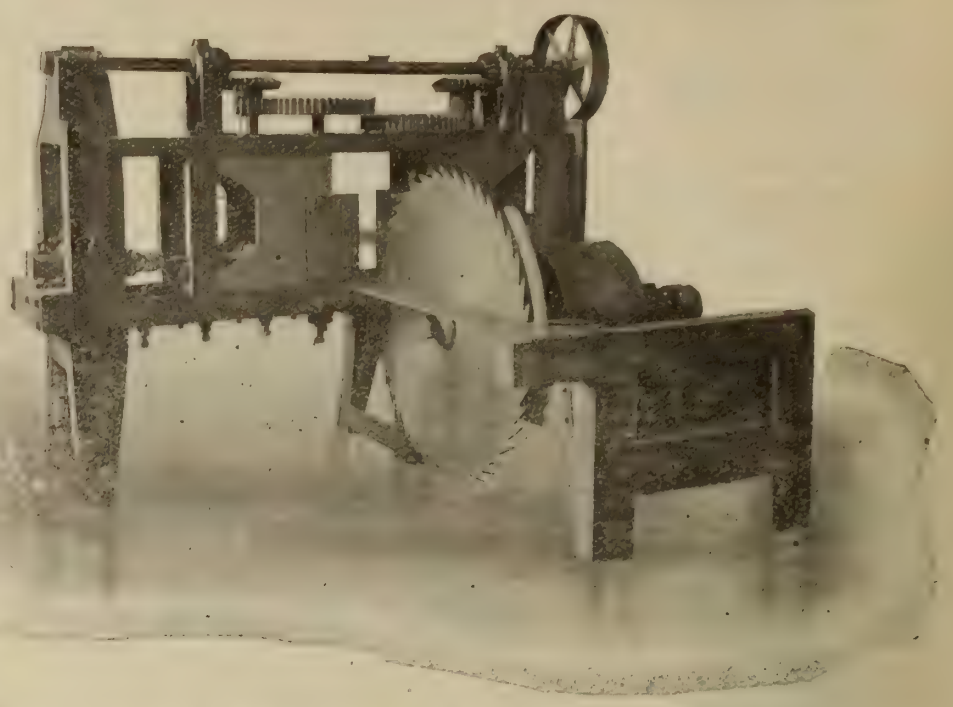

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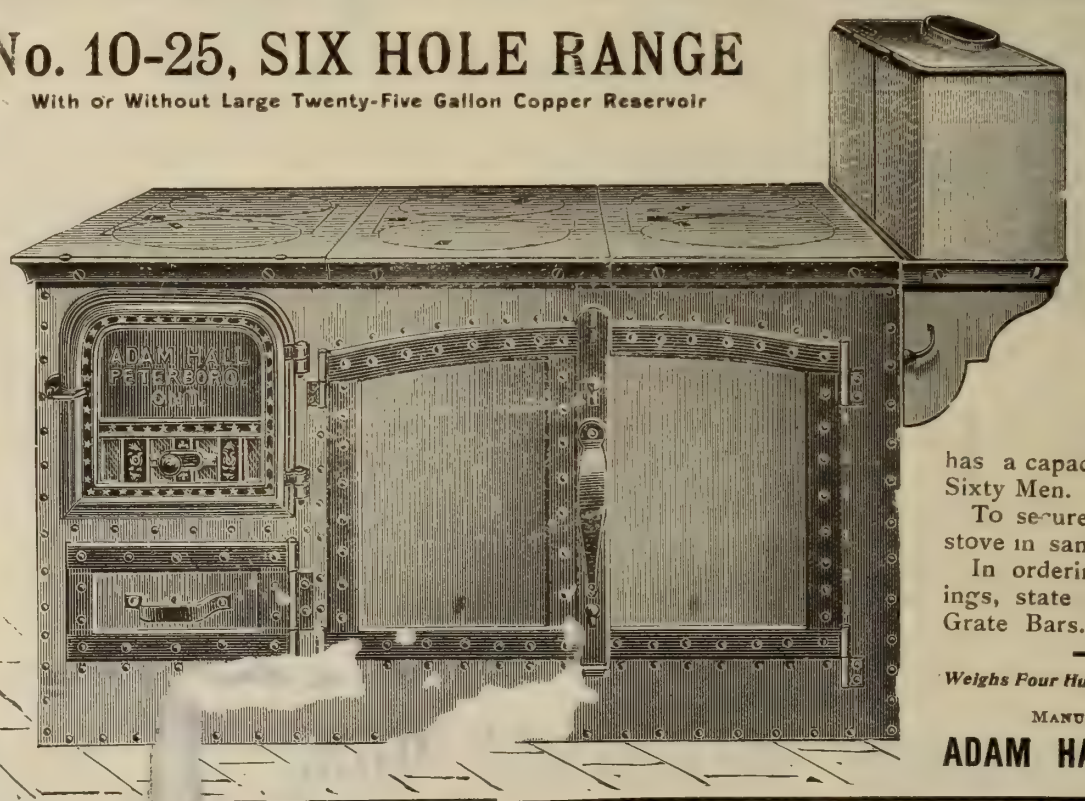

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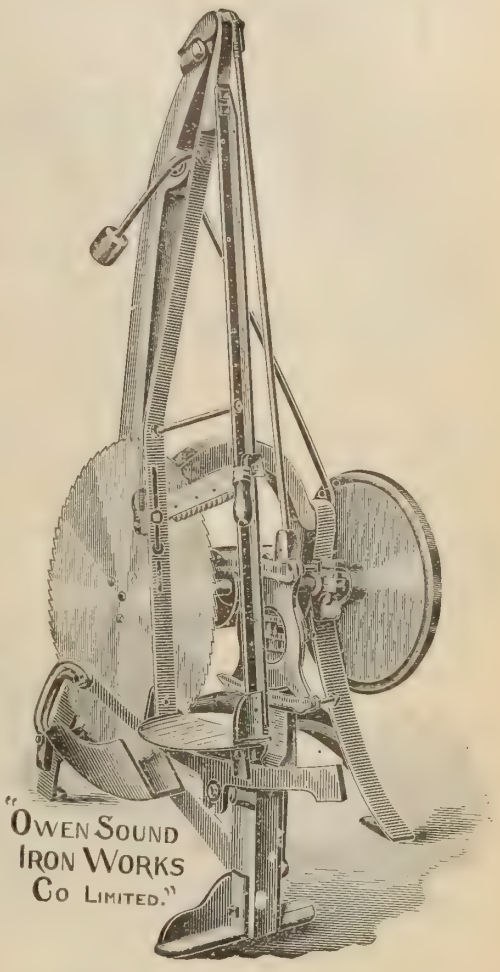

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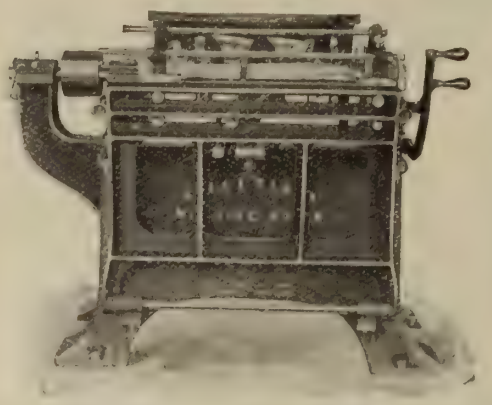

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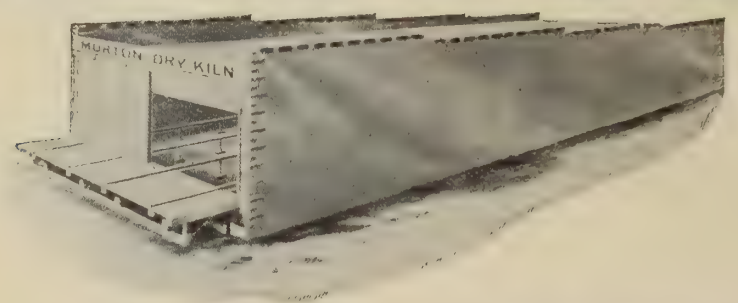

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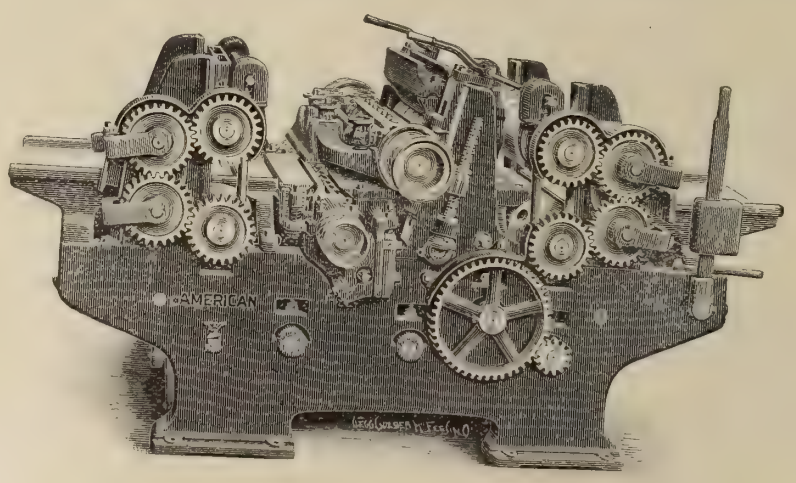

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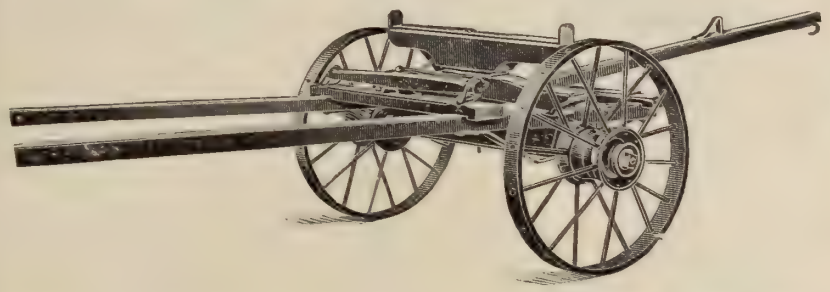

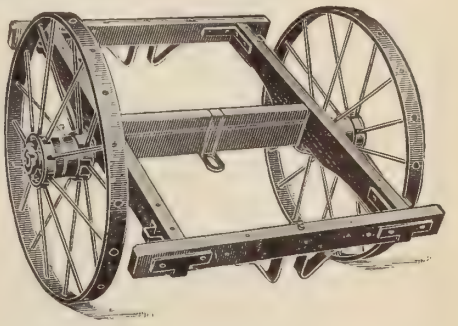

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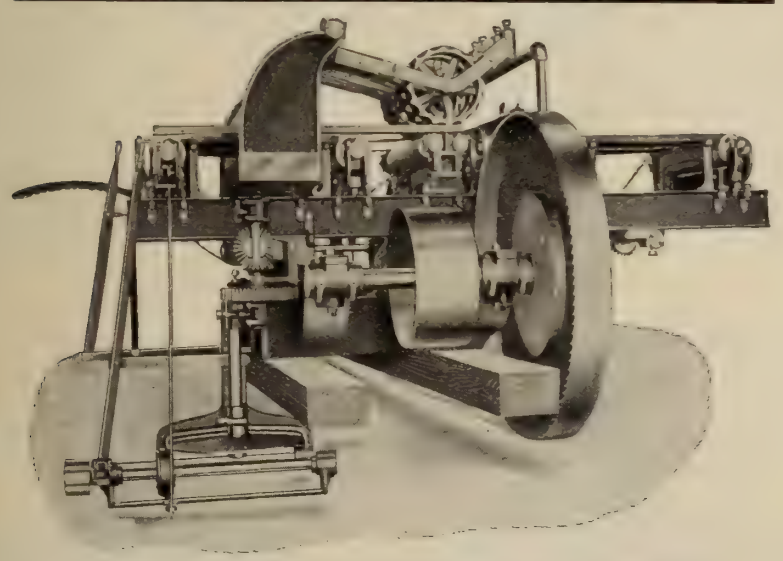

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1—250 H. P. Slide Valve Engine, 18 in. x 36 in. Cylinder, with new Nordinburg cut-off Governor; one rope pulley 8 ft. diameter, grooved for 18—1 in. ropes, the driven pulley is 40 in. dia., fly wheel 12 ft. dia.; also one Tubular Hot Water Heater.
1—Large Double Edger with 6 saws.
1—Saw Edger.
1—2-Saw Trimmer.
1—Saw Trimmer.
1—Twin Circular Saw Rig, with six Saws, Prescott Gun-Shot Steam Feed, cylinder 7 in. dia. 38 ft. 6 in. long, Carriage and Set Works complete.
1—Large Burner, 35 ft. dia., 80 ft. high, with Spark Arrester, Balcony and Ladder, Grate Bars, Bearing Bars, etc., all complete.
Shafting from 2 in. to 8 in. dia. with boxes and couplings.
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Sawdust and Refuse Conveonrs and Carriers.
1—32 in. x 48 in. High Pressure Engine made by J. McDougall, Caledonian Iron Works, Montreal, with Nordenburg Automatic Cut-off Governor. Moffat Hot Water Heater, made by Goldie & McCulloch, Galt, Ont. 14 in. x 11 ft. Crank Shaft. 9 ft. x 14 in. Mortice Gear with 85 teeth. 4 ft. 6 in. x 14 in. pinion with 43 teeth.
7—54 in. x 13 ft. 6 in. Boilers, 46 4 in. Tubes, full fronts, Grates, Fire Brick Lined Furnaces, Smoke Boxes, Blow-Off, Globe and Safety Valves, Steam and Glass Water Gauges, and Try Cocks complete.
4—36 in. x 11 ft. Boilers, 22 3-in. tubes, fronts and smoke boxes.
3—36 in. x 15 ft. Dutch Oven Boilers, 38 3-in. tubes, half fronts, smoke boxes and boiler plate breechings, part fittings.
1—8 ft. Band Saw Mill, made by Phoenix Mfg. Co., Eau Claire, Wis. Complete and in fine condition.
1—Twin Circular, with Carriage, Head Block, and Prescott Gunshot Steam Feed. Made by William Hamilton Co.
1—3 Head Block Saw Carriage, with double acting ratchet Set Works, Power Receding Gear, Boss and Hammer Dogs, 51 ft. each of V and Flat Tracks, all complete. Made by Wm. Hamilton Mfg. Co., Peterboro, Ont.
1—Gang Saw Mill, Gate 42 in. wide, 50 in. deep, 18 in. stroke, Crank Shaft 9 in. dia., 10½ ft. long; Drive Pulley 48 x 24 in., Flywheel 78 in. x 8 in. Live and Idle Iron Rolls, etc., etc., all complete and good as new. Made by Stearns Mfg. Co., of Erie, Pa.
2—4-Saw Edgers, made by Stearns Mfg. Co , Erie, Pa.
1—2-Saw Edger, made by Wm. Hamilton Mfg. Co., Peterboro, Ont.
1—Six Saw Slash Table with Arbors, Saws, Sprocket Wheels and Chains complete.
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1—40 in. McEachren Hot Air Fan.
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All necessary Belting, Saws, Log Canters, Log Lifters, Sawdust and Refuse Conveyers and Carriers, Live and Idle Rolls, Transfers, Shafting from 1½ to 11 in. dia., Pulleys from 6 in. to 102 in. dia., Straight Face, Bevel and Mitre Gears, Paper and Iron Frictions, Filing Room Tools, Saw Grinders, Anvils, Saw Fitting Tools, etc., etc.
10—Hydrants with about 2000 ft. of pipe from 3 in. to 10 in. dia. and two Hose Carts.
60—Lumber Roller Cars.
A lot of Electric Lamps and Fixtures.
The above Machinery, etc., is all from the best and most reliable makers. All in good condition, practically as good as new and ready for immediate work.
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TERMS: All items subject to personal inspection before purchase. Also subject to prior sale. Offers for the whole in bulk or in part to suit purchaser will be considered. Payment to be made in cash for Machinery where it now stands. For any further particulars apply to

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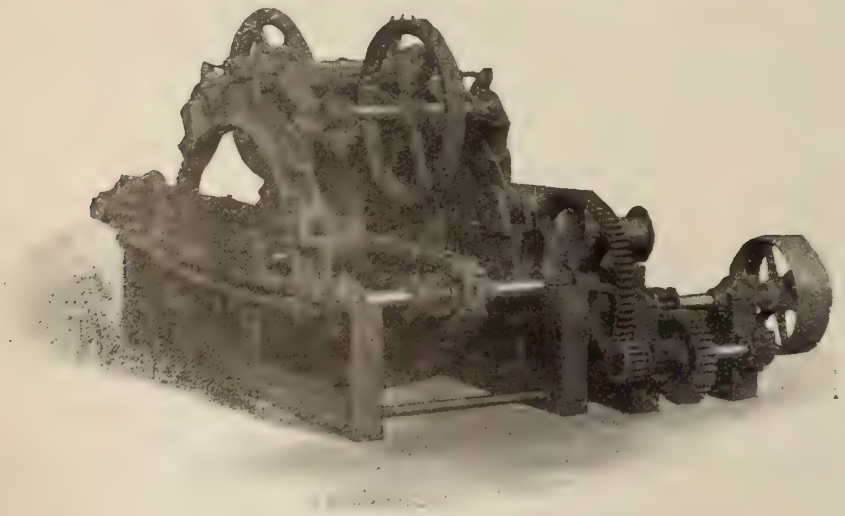

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Slabs both sides of the log accurately and rapidly at one operation. Both saws movable to or from the centre simultaneously by means of a lever within the sawyer's easy reach, and the spacing indicated on a quadrant in plain sight. Will handle logs from 4½ to 20 inches in diameter and from 30 inches in length up. This machine will cut

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It Meets the Requirements Perfectly.

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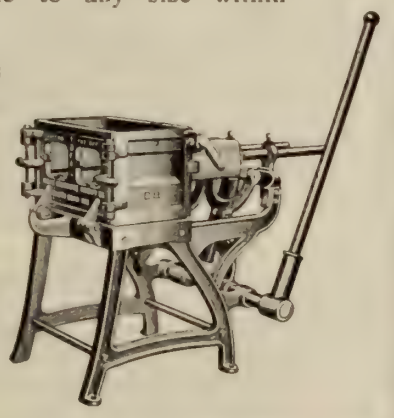

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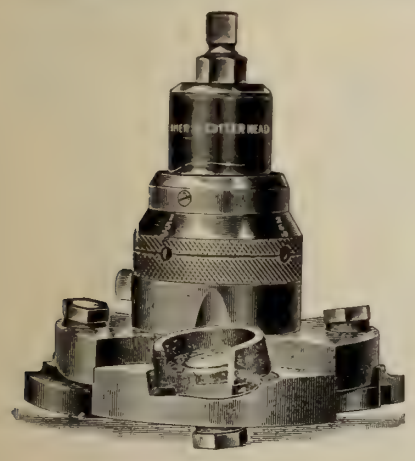

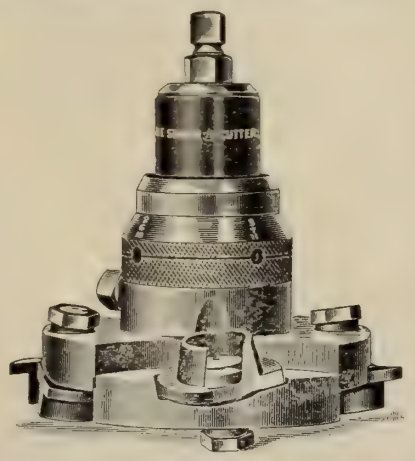

Best of All, Fig. 202 and Fig. 203.

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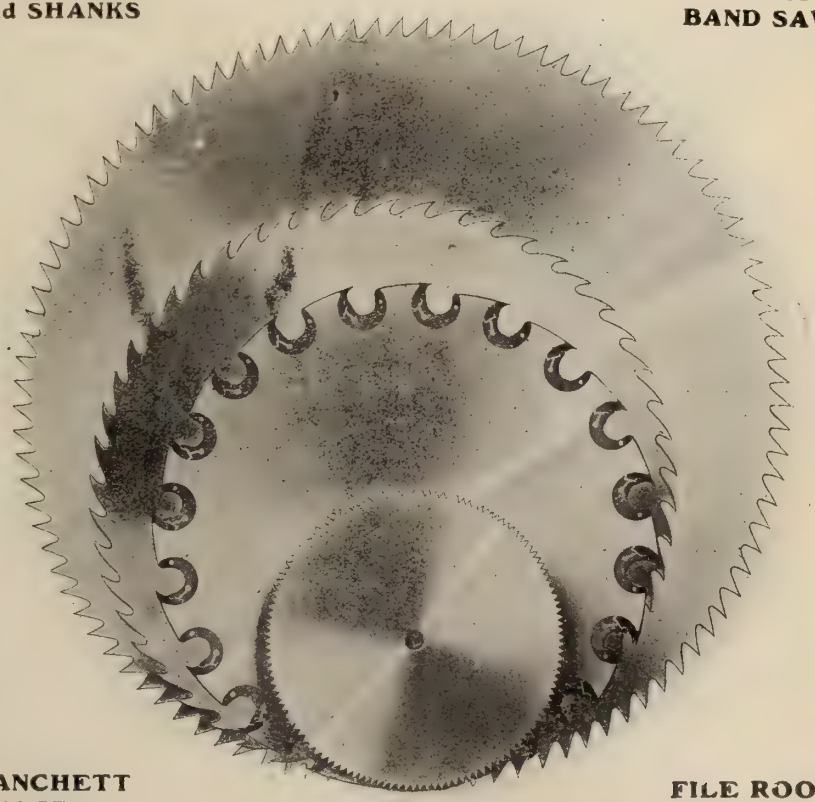

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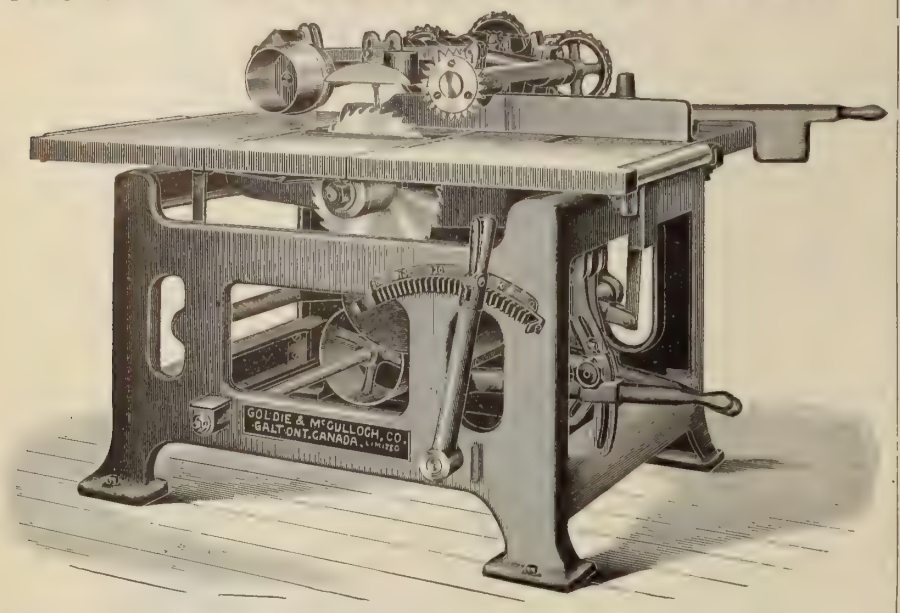

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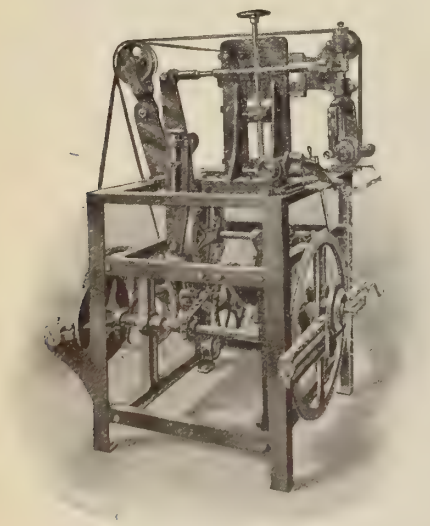

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are the most modern and practical machines manufactured for sharpening saws automatically.

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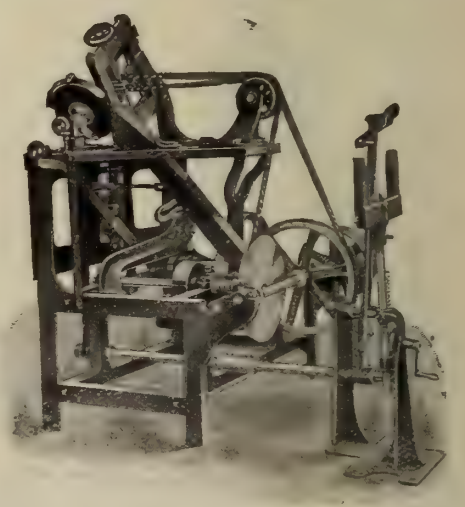

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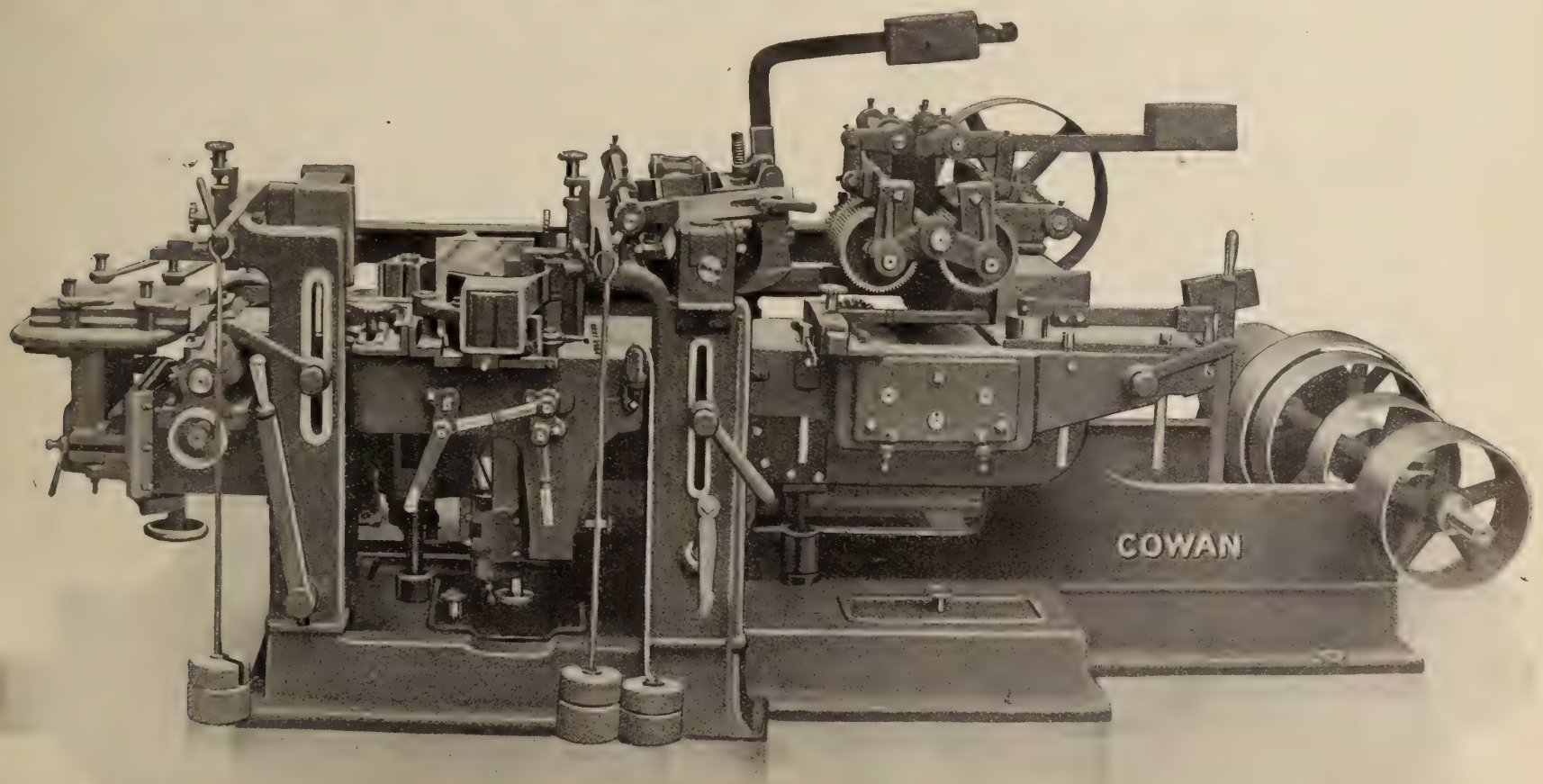

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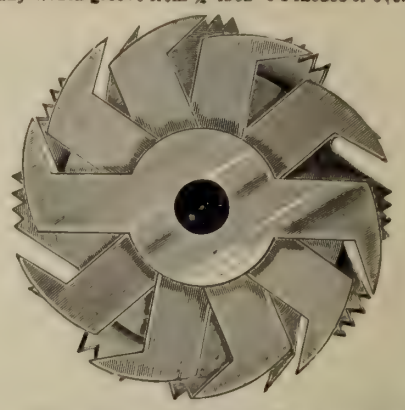
For cutting any width groove from ¼-inch to 2 inches or over



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This is the only Dado Head on the market that gives entire satisfaction on all classes of work No screw adjustment For different width grooves, simply remove or add inside cutters. Sold by builders and dealers of woodworking machinery in all parts of the United States. Will send on approval, in competition with any other make on the market; if not the best return at our expense. HUTHER BROS. SAW MFG CO., Inc., 229-231 Mill Street, ROCHESTER, N. Y., manufacturers of Circular Saws, Morgan Pattern Lock-Corner Box Cutters, Concave Saws, etc.

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Date of Publication of 1906 Edition, FEBRUARY 28TH.

LONDON : THE CARTER PUBLISHING CO., 8 New Bridge St., E.C.

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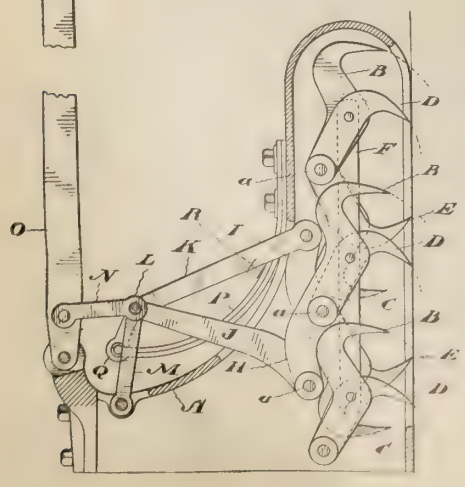
We claim many points of superiority for our Patent Mill Dog, of which seventy-five have been sold

Each mill dog contains ten dogs; six of the dogs have the down-forward motion and four of them the upward motion, so that the log or cant is dogged both on the top and bottom, preventing it from turning its position on the head-block. Even if the log were dogged, not touching the head-block, it would hold the log as well.

It will be seen by the cut that these ten dogs are fastened on the pivot, pin or bolt marked "A" on the cut, and connected with link bars from the principal dog to the lever "O," which operates all the dogs.

Fig. 1.



There are five of the dogs which project more than the others, about two inches from the head-block, and called the log dogs; and five which project about ⅝ inch from the head-block, and called the board dogs; but when dogging a board or a plank or a stock, all the dogs come evenly out of the head-block, about ⅝ inch, so that in dogging a board or a stock, both the log dogs and board dogs grip it, providing that the stock or board is wide enough to take all the dogs.

This patent mill dog will dog perfectly safe in all classes of timber, be it pine, hemlock or hardwood of any description, and besides it does not tear the board or stock.

Manufactured by

P. PAYETTE & COMPANY
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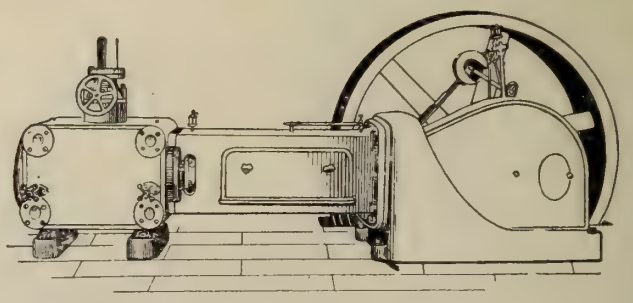

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They are fitted with Robb-Armstrong automatic governors, giving close regulation and high economy.

Oil is forced through piping to all bearings, ensuring positive and copious lubrication.

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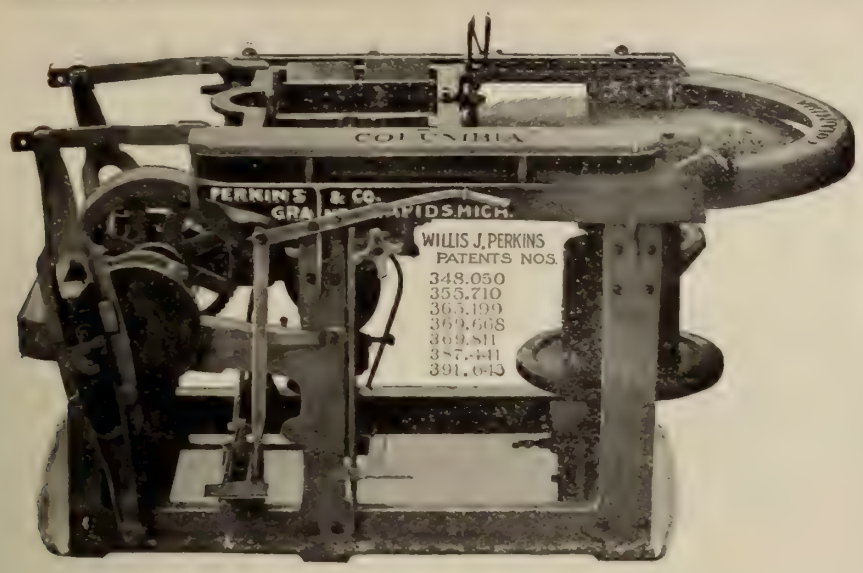

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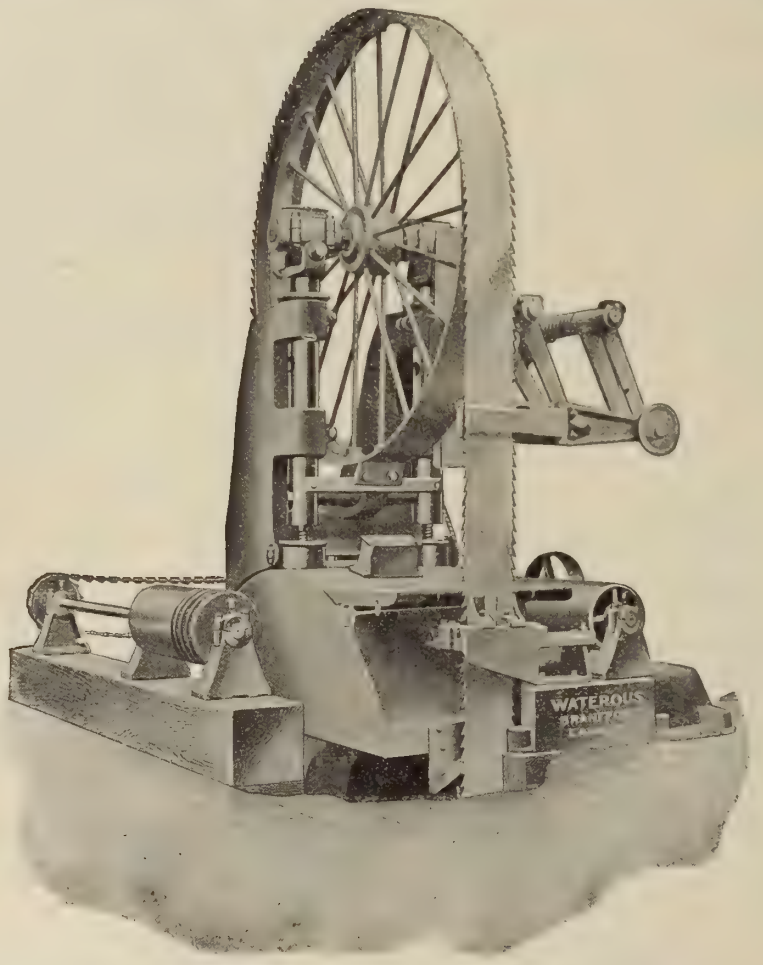

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in 9, 8 and 6 ft.

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Single and Double

Cutting

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for attachment to any flooring machine, to bore jointed flooring.

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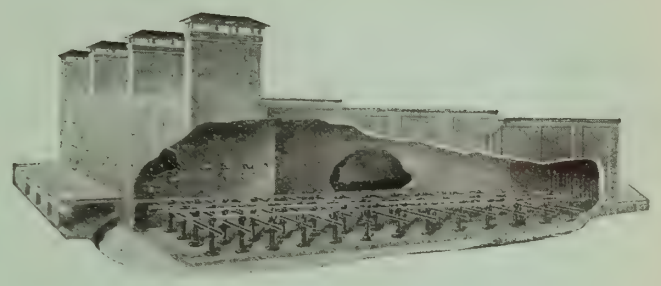

You buy a dry kiln for a long, long time. Why buy one with heating system already antiquated? The New Heating System of

The Standard Dry Kiln

is ten years ahead of any other on the market.

The arrangement and construction of this new heating system are such that it costs less to install, in money and labor, than any other; costs less to operate; dries hardwoods and soft woods with equal success; rarely requires repairs; and is absolutely out of the fire-danger class.

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COIL, CABLE, DRAG
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Conveyers for Logs, Lumber, Shavings, Offal and Saw Dust.

Chain Conveyer for Refuse.

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THE LIMA LOCOMOTIVE AND MACHINE COMPANY
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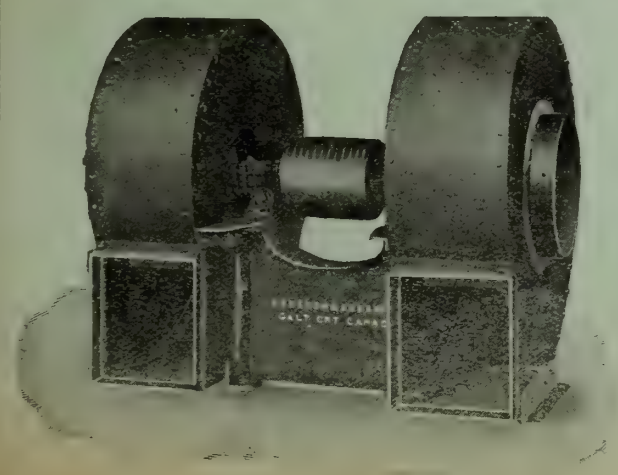

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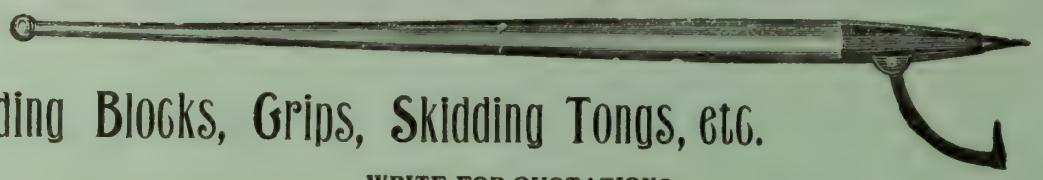
On our "BOSS" PEAVEYS and CANT HOOKS we use only FORGED STEEL SOCKETS. They are the LIGHTEST and STRONGEST on the MARKET. They are all fitted with air dried SPLIT ROCK MAPLE HANDLES, and shipped to every lumbering point in CANADA.



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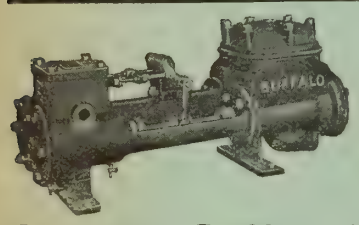

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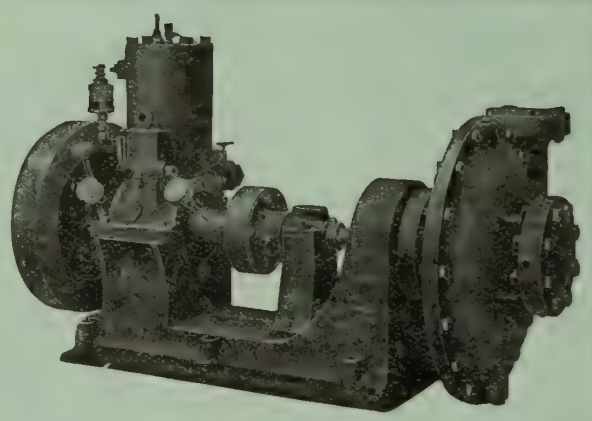

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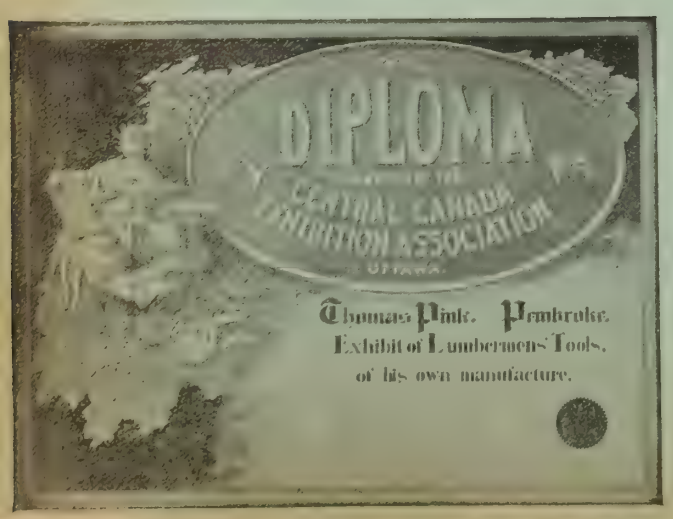

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In Every Province of the Dominion, New Zealand, Australia, Etc.

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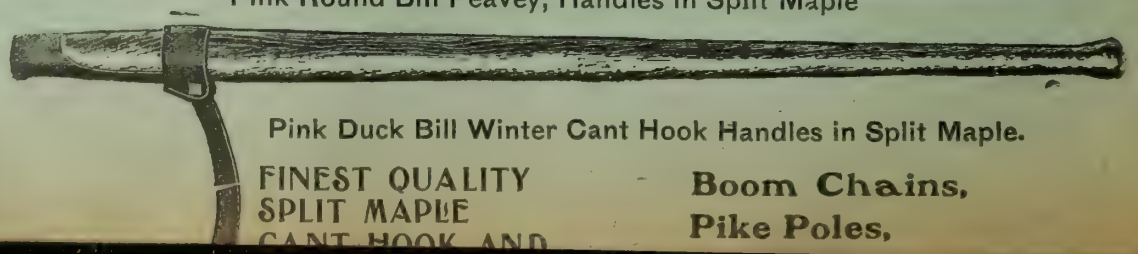

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FINEST QUALITY SPLIT MAPLE CANT HOOK AND

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CANADA LUMBERMAN
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REACHES REGULARLY MANUFACTURERS, BUYERS AND SELLERS OF TIMBER PRODUCTS IN EVERY PART OF CANADA AND LEADING IMPORTERS ABROAD

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Guaranteed daily drying capacity from 50 to 100 per cent. greater than possible in the ordinary type of kiln.

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SEATTLE, U. S. A.

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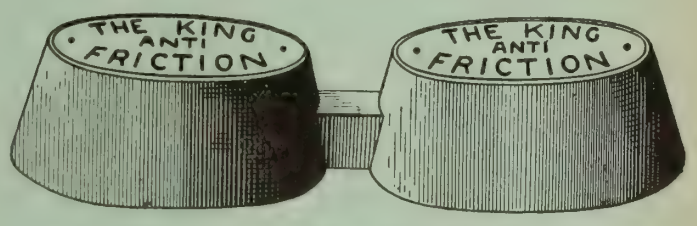
KING BABBITT
The Best and Cheapest Metal for Saw Mill Machinery
PRICE 20 CENTS PER POUND



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A good thing is always worth the money. This is true of our belting. . . . .
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Never is affected by wetness, and does not stretch
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For the WET PLACES in the SAWMILL
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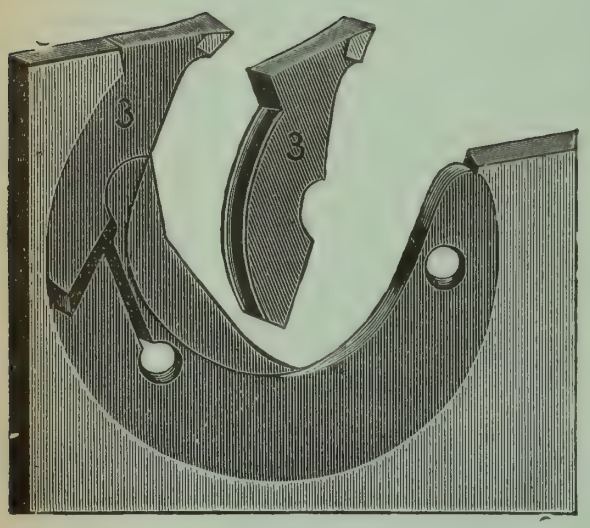
St. Catharines, Ont.

We are the Sole Manufacturers of Saws under the **Simond's Process** in the Dominion of Canada.

There is no process its equal for tempering circular saws. Other makers recognize this fact, as some of them, in order to sell their goods, claim to have the same process. **All such Claims are FALSE,** as the patentee in the U. S. and ourselves are the only firms in the world who use it.



INSERTED TOOTH SAWS

Notice the improved shank. We call particular attention to the swell which strengthens it at the weakest part and which gives it more wear than the old style.

Shanks made in usual gauges and to fit your saws perfectly.

SHINGLE SAWS

The quality of the "Simonds" Shingle Saws is proven by the fact that the largest shingle and machine manufacturers in Canada are using them.

Run a "Simonds" and you will increase your output.

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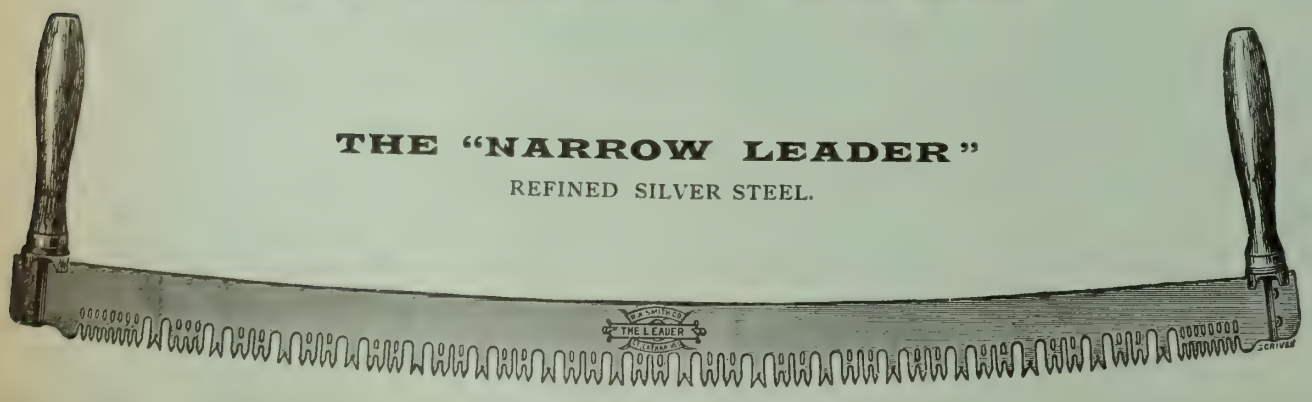


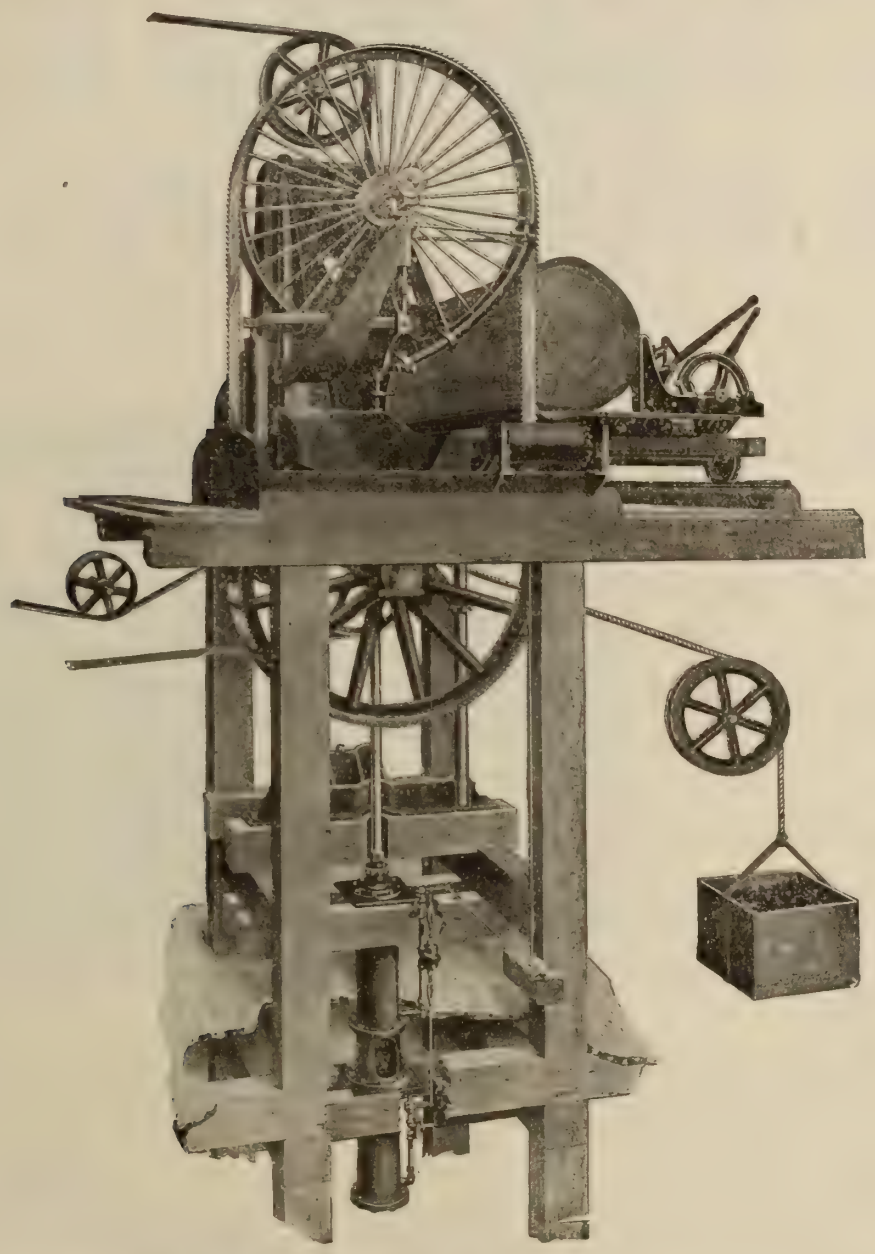
The Simonds temper and style of tooth make the "Leader" the fastest and easiest cutting saw manufactured.

Write for prices.

R. H. SMITH CO., Limited, St. Catharines, Ont.

UP-TO-DATE

SAW MILL MACHINERY



"Allis" Double Cutting Telescopic Band Mill

The advantage of this machine over others is that the entire merchanism carrying the wheels up and down is moved so as to bring the point where the saw leaves the upper wheel as close to the top of the different sized logs as possible. The object in this is to get a short, rigid blade, to keep the saw above the cut as short as possible at all times and to keep the surplus length of blade below the log instead of on top, as with the ordinary mill. By lowering the mill we also bring the pressure of the log against the saw at a point close to where the saw leaves the upper wheel, making it impossible for the feed to crowd the saw backward on the wheels. In double cutting no offset is required on the carriage. The carriage travels at a more uniform rate of speed in both directions, which relieves it of the usual rack and strain caused by the high rate of speed at which carriages are gigged. The saw is much safer to run than the ordinary saw, because of its cutting its own clearance with either edge when the carriage is in motion. The cut shows the mill raised for a large log. Band Mills are fully described in Bulletin 1700.

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We build the "Lidgerwood" engines for logging purposes, for mines, quarries, railway and bridge building, pile driving and general contracting.

"Bullock" Electric Apparatus.

Dynamos, Motors, Switchboards and Transformers. Complete Electric Light and Power Plants built and installed.

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We Still Head the Procession of 1907

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FREDERICTON, N. B.

McFarlane, Thompson & Anderson Mfg., Co., Ltd.

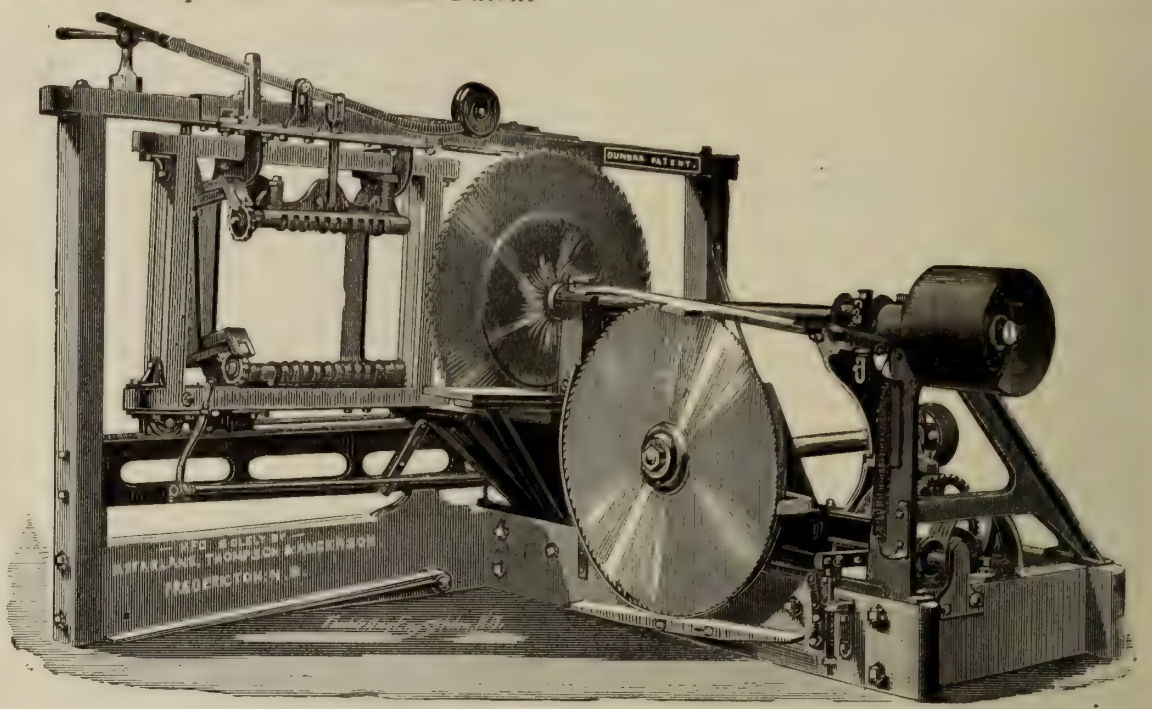
Manufacturers of the only original

PATENTED DUNBAR SHINGLE MACHINE

And Sole Proprietors to the said Patent

Universally admitted as being the best machine on the market from the Atlantic to the Pacific

Better than Ever as Constructed for 1907, having ring oilers on journals and other valuable improvements



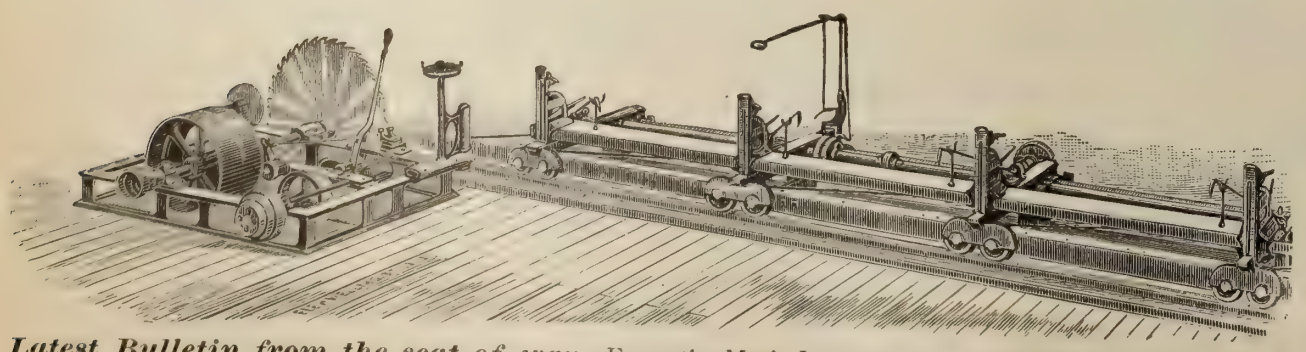
PATENT DUNBAR SHINGLE MACHINE.

The following well known firms are a few of the many who are using the Celebrated Dunbar Shingle Machine :—Metis Lumber Co., Quebec, 15 machines ; John A. Morrison, Fredericton, N.B., 10 machines ; Gibson R'y. & Manufacturing Co., Marysville, N.B., 10 machines ; Hastings Shingle Manufacturing Co., Vancouver, B.C., 16 machines, and hundreds of others from one to five machines.

The McFarlane, Thompson & Anderson Mfg. Co., Ltd., Dunbar Shingle Machine is a record-breaker in the west—(New Whatcom Blade, Washington State). The following may be of interest to mill operators and others ; it is, we believe, the best six day record ever made on this class of machine—a Dunbar upright ; the bolts were taken as they came from the woods, without selection, and were a good average quality. This remarkable run was accomplished recently at the George A. Cooper mill, Chuckanut Siding : Total cut for six days, 2 shifts of ten hours each per day, 394,000 eighteen inch shingles. In the day shift, Harry A. Edison, sawyer, cut 218,000, an average cut of 36½ thousand, and the night shift, Levi Loop, sawyer, cut 176,000, an average of 29⅓ thousand of eighteen inch shingles per day.

"When all the rest fail, or are down for repairs, or are cutting shims, the McFarlane, Thompson and Anderson Mfg. Co. DUNBAR SHINGLE MACHINE is still cutting the standard shingle of the world." From the Atlantic to the Pacific they all say it

Have sold more in 1906 than 1905 and orders for 1907 still give evidence of increasing. People who know, won't have any but our Shingle Machine



Latest Bulletin from the seat of war—From the Metis Lumber Co., Price, P. Q., in reference to the 15 machines sold them :

"Replying to your enquiry as to the running of the shingle machines you sold us, would say that they have given entire satisfaction, and have run very successfully so far. We have sawn 30 million shingles in 70 days to date, and count on sawing 10 million more this season."

THE METIS LUMBER COMPANY.

We manufacture a complete line o IMPROVED ROTARY SAW MILLS, GANG EDGERS, LATH MACHINES, BUCKEYE AUTOMATIC CUT-OFF ENGINES and all kinds of MILL MACHINERY.

Our prices are right.

Kindly allow us to quote before purchasing elsewhere.

For further particulars address

McFarlane, Thompson & Anderson Mfg. Co., Limited

Fredericton, N. B.

COBBS HIGH PRESSURE SPIRAL PISTON AND VALVE ROD PACKING

"Cobb's" Packing is especially adapted to withstand heat and highest pressure. The rubber core is oil and heat-proof and will not harden, but remain elastic indefinitely. The outside covering is made of material that is not affected by heat. The lubricant employed is the result of much scientific research and is absolutely free from grit or acids.

We make everything in rubber requisite for an engine room. The following are some of our specialties:

VULCAN SPIRAL PACKING, MAGIC EXPANSION SPIRAL PACKING, AMAZON HYDRAULIC SPIRAL PACKING, INDESTRUCTIBLE (WHITE), KARBONITE (BLACK RUBY (RED), AND SALAMANDA SHEET PACKINGS, RUBY SECTIONAL GASKETS, GAUGE GLASS RINGS, DISCS, BIBB WASHERS, PUMP VALVES DIAPHRAGMS, PACKING RINGS, RUBBER BELTS, &C.

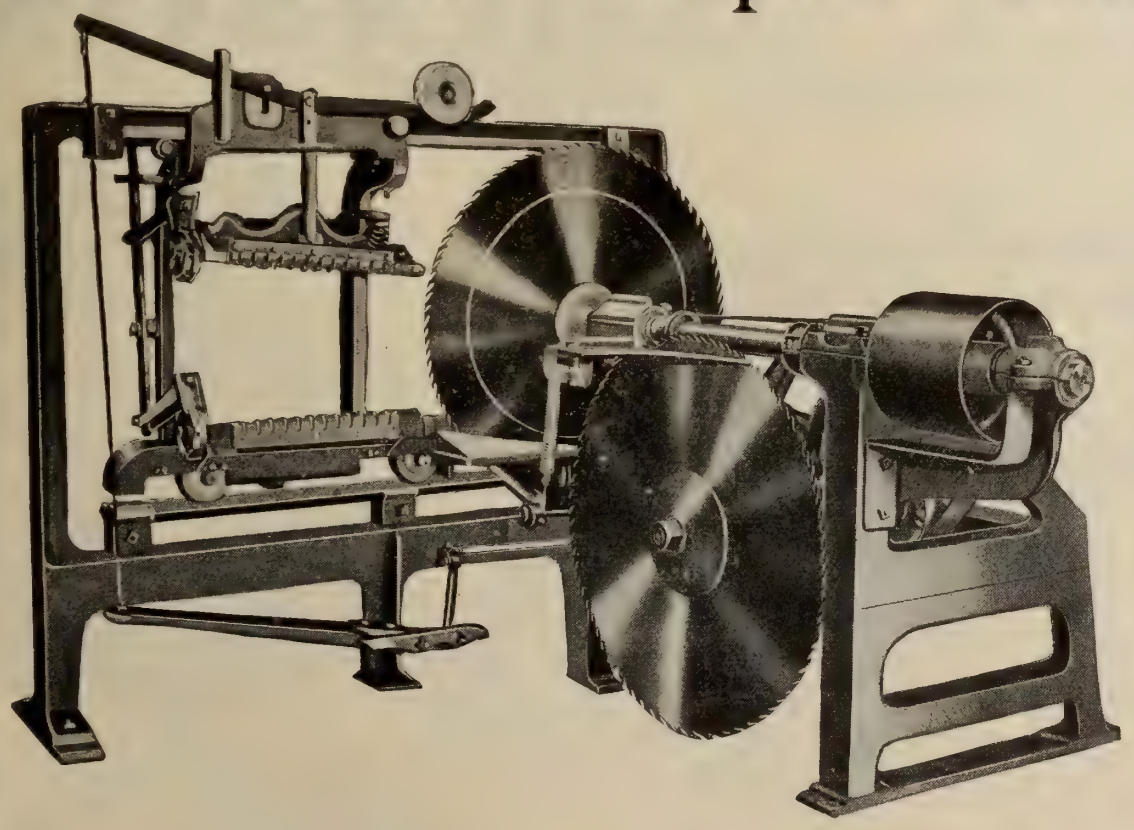
MANUFACTURED AND PATENTED EXCLUSIVELY BY

NEW YORK BELTING & PACKING COMPANY, LIMITED

91 and 93 Chambers Street, NEW YORK

CANADIAN AGENTS: **THE ECONOMICAL MANUFACTURING & SUPPLY CO., Limited**
173 Queen Street East, TORONTO, CANADA

Iron Frame "Simplex" Shingle Machine



IN this, our latest design of Shingle Machine, we have incorporated all the advantages contained in our wood frame "Simplex" and added several improvements.

The arbor has been made heavier and a third bearing added to support it outside the driving pulley. The method of putting lead in the saw arbor has been greatly improved. This is now done by swinging on a centre directly under the saw the whole frame which carries the arbor. Thus the alignment of the bearings is not in any way affected and there will be no danger of hot bearings after the lead has been changed. The change may be made while the machine is running and without stopping the carriage.

An improvement has also been made in the method of driving the edger. It is belted direct from a shaft running at right angles to the main arbor from which it is driven by means of a bevel friction. This makes a very neat, compact drive and has proved satisfactory in the mill.

The rail on which the carriage travels is made of square steel and when worn can be renewed by simply turning upside down.

Over three hundred of our Upright Machines (wood and iron frames) are in use in British Columbia and Washington.

MANUFACTURED ONLY BY

Letson & Burpee, Limited, Vancouver, B. C.

THE ORIGINAL AND ONLY PERFECT

CHISEL-TOOTH SAW

ALL OTHERS ARE IMITATIONS.

GOLD MEDAL (HIGHEST AWARD)
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SEND FOR NEW ILLUSTRATED CATALOGUE,
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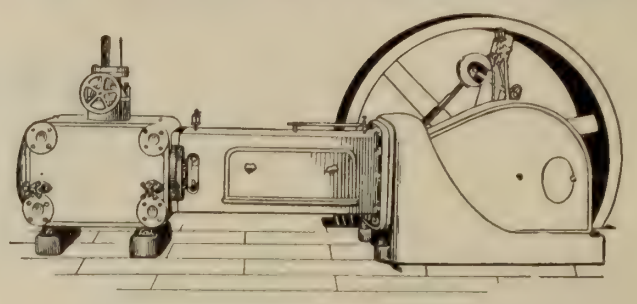
LONG STROKE ENGINES



We manufacture a full line of sizes of the style of engine shown in cut, either Corliss type or with Sweet balanced valve.

They are fitted with Robb-Armstrong automatic governors, giving close regulation and high economy.

Oil is forced through piping to all bearings, ensuring positive and copious lubrication.

They are built on the interchangeable system and duplicate parts exact in fit can be supplied on short notice.

ROBB ENGINEERING CO., Ltd.

AMHERST, N.S.

DISTRICT OFFICES { 320 Ossington Avenue, Toronto, WILLIAM McKAY, Manager.
Bell Telephone Building, Montreal, WATSON JACK, Manager.
355 Carlton Street, Winnipeg, J. F. PORTER, Manager.

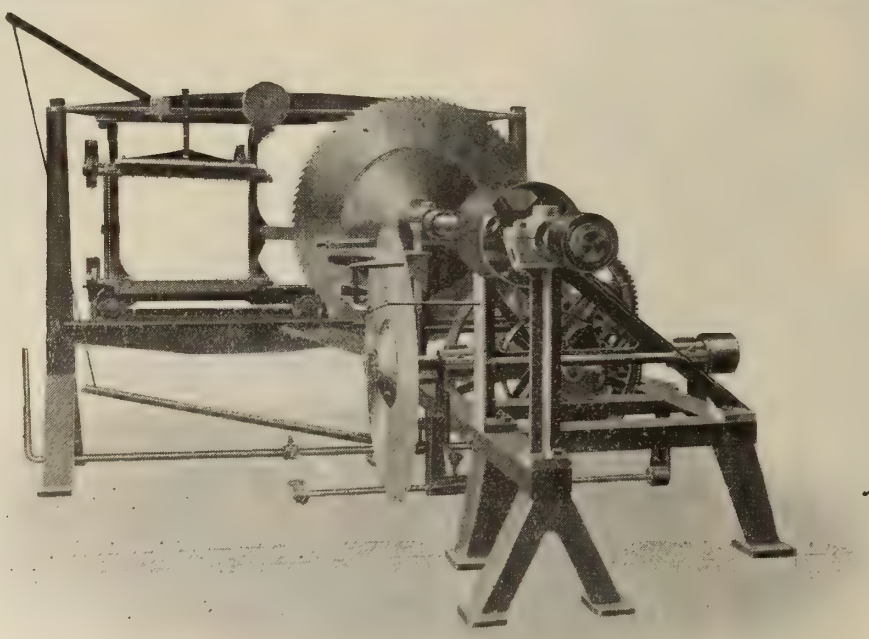
THE

FAMOUS JOHNSON

UPRIGHT SHINGLE MACHINE

Capacity 30,000 to 45,000
Shingles per ten hours

The Machine that has brought BRITISH COLUMBIA SHINGLES to the Front.



REASONS

Its construction is simplicity itself.

It is the envy of all its competitors.

If you want to make shingles that bring the highest price, you must use the Johnson Machine.

It has constantly added original improvements, which others try to follow, but the strides are too rapid, it always leads.

The Johnson machine is the only machine.

MANUFACTURED BY

The Schaake Machine Works, Limited

NEW WESTMINSTER, British Columbia, and SEATTLE, Wash.

OVAL WOOD DISH MACHINE

"DEFIANCE"

Wood--Working Machinery

For Manufacturing

HUBS, SPOKES, WHEELS, WAGONS, CARRIAGES, RIMS, SHAFTS, POLES, NECK-YOKES, SINGLE TREES, BARREL HOOPS.

Handles of Every Kind, Insulated Pins, Spools, Bobbins, Oval Wood Dishes, and General Wood-Work.

Invented and Built by

THE DEFIANCE MACHINE WORKS,

DEFIANCE, Ohio, U. S. A.

"D" SHOVEL HANDLE LATHE

Long logs and heavy logs are loaded by the

McGIFFERT Log Loader

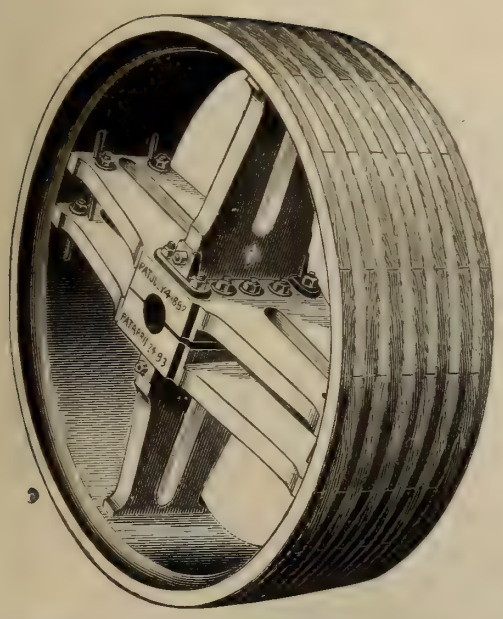
just as easily as other kinds of logs.
Fact is--its heavy steel construction, great power and wide base make it equal to any condition where a loader could possibly be used. (15,000 pound logs are handled by it.)
It *propells* itself, *stops* and *switches* its own cars, and is *always ready.*

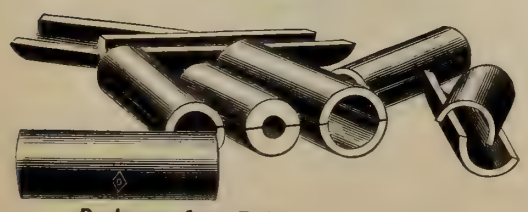
Ask for our booklet

CLYDE IRON WORKS,

DULUTH, MINN.

DODGE!




Dodge 4 Arm Pulley and Bushings. Absolutely High-grade!

STANDARD WOOD SPLIT PULLEYS

For Saw Mill and Planing Mill use.

More Dodge pulleys made and sold daily than all other makes combined is still our best advertisement.

The Dodge Pulley is offered absolutely on its merits—hard maple arms, hub blocks and bushings, with soft maple rims, a continuous smooth belt surface without ends of arms projecting through rims. Arms anchor bolted to rim; bushings turned and bored from the solid square. Every pulley is perfectly balanced.

Every Pulley is thoroughly well nailed.

SOLE MAKERS

DODGE MANUFACTURING CO.

TORONTO - MONTREAL

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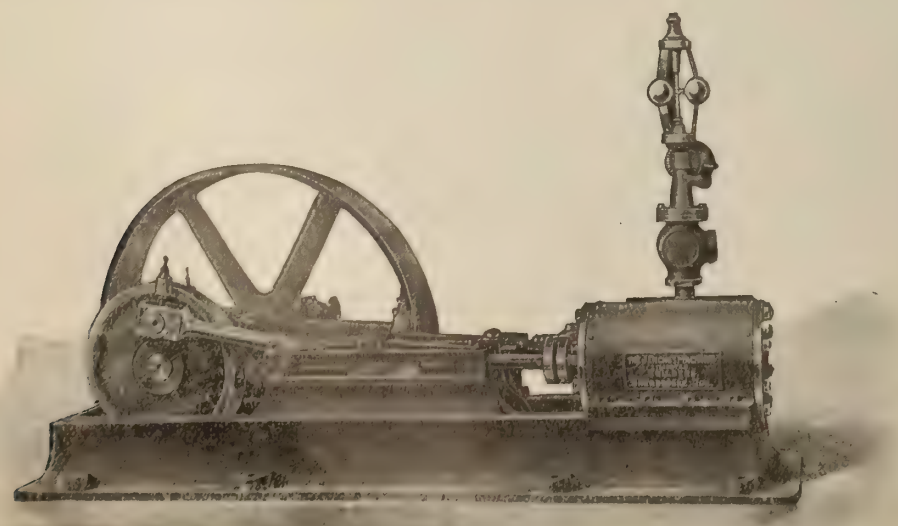

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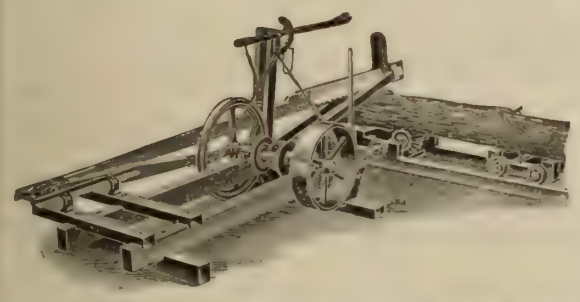

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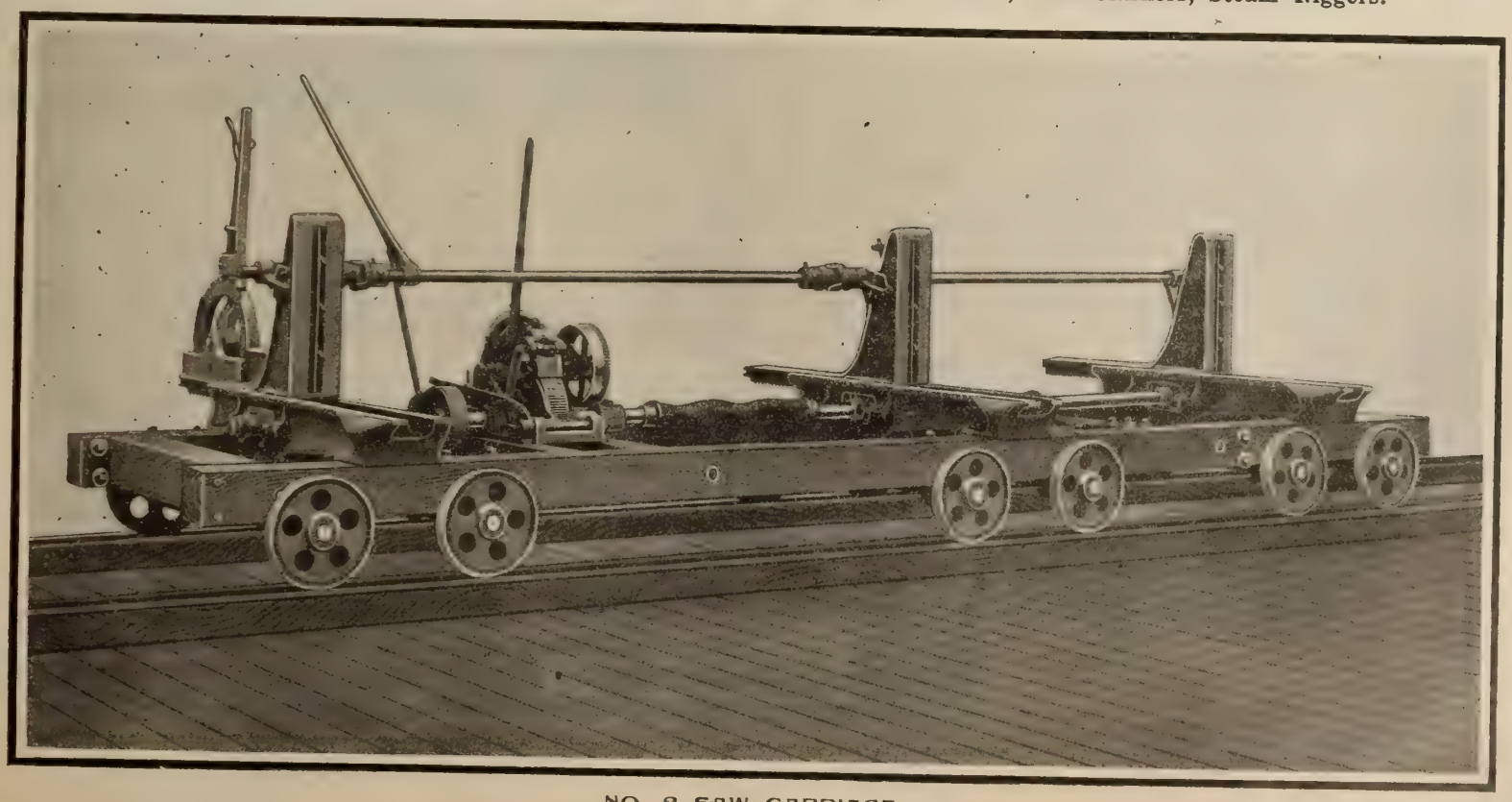

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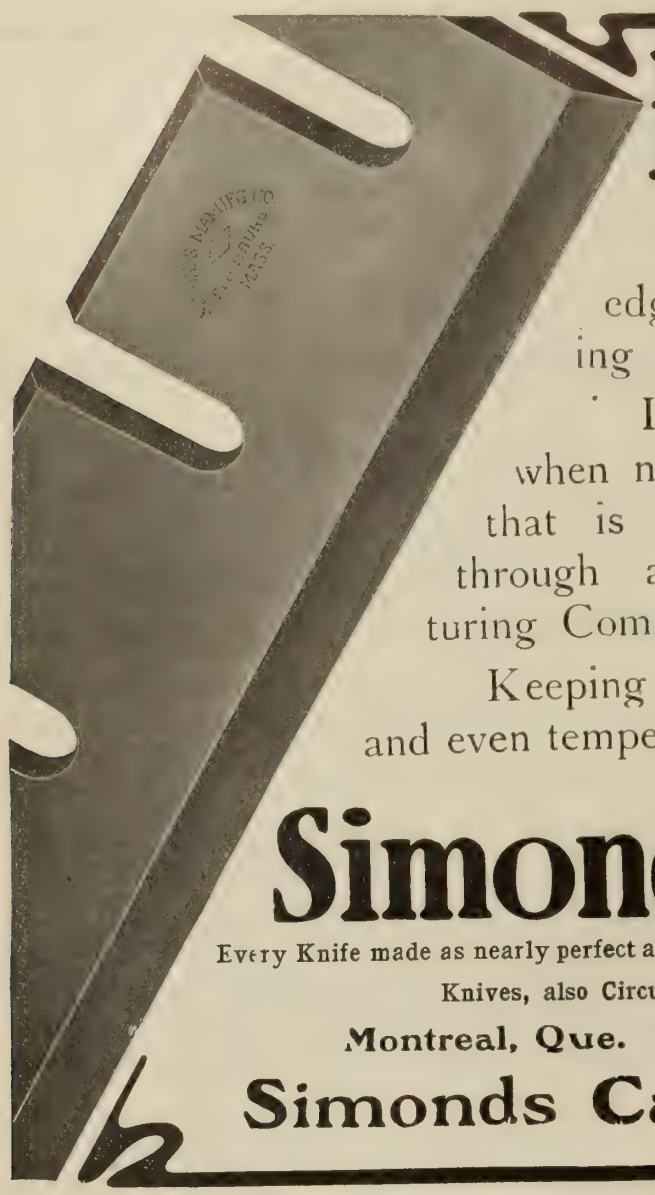

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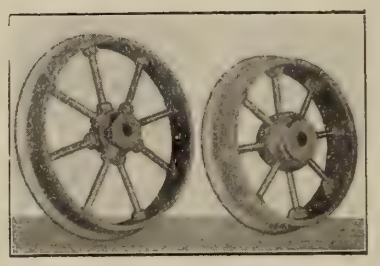

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CANADA LUMBERMAN
AND WOOD-WORKER

VOLUME XXVIII. NUMBER 4. } TORONTO, MONTREAL — APRIL, 1907 — WINNIPEG, VANCOUVER { TERMS, $1.00 PER YEAR Single Copies, 10 Cents

THE MUNIFICENCE OF A CANADIAN-AMERICAN LUMBERMAN.

The people of Canada are indebted to different capitalists for magnificent gifts in the interest of education. Of some of these benefactors little has been heard, and to this class belongs Mr. M. F. Rittenhouse, now a resident of Chicago, and one of the leading lumbermen of the United States.

Mr. Rittenhouse was born near St. Catharines, Ontario, in 1846, and early in life went to Chicago. After spending a short time in the office of the Chicago Morning Post, he secured a position as tally-boy with Giese & Gantine, lumber inspectors, but, realizing the necessity of broadening his education, he returned to Canada for more schooling. This being acquired, he returned to Chicago, and was soon promoted to the management of a branch lumber yard for McMullen, Funk & Company. Still not satisfied, he dropped out of the business to take a course at Eastman's Business College. Then he became connected with B. L. Anderson & Company and the J. Beidler & Bro. Lumber Company, and, in 1883, severed his connection to organize with Jesse R. Embree the wholesale lumber firm of Rittenhouse & Embree, now the Rittenhouse & Embree Lumber Company, of which he is now president. The annual turn-over of this company is in the neighborhood of 50,000,000 feet. Mr. Rittenhouse is also president of the Arkansas Lumber Company, of Warren, Arkansas, and is interested in the Chandler Lumber Company and other prominent concerns.

MR. M. F. RITTENHOUSE

RITTENHOUSE SCHOOL AND FLOWER BEDS, JORDAN HARBOR ONT.

While thus engaged in climbing the ladder of business fame, Mr. Rittenhouse did not forget the land of his birth. A few years ago he assisted to the extent of one-half the entire cost of building a modern and commodious school house at Jordan Harbor, Lincoln county, an illustration of which is shown in this issue of THE CANADA LUMBERMAN AND WOODWORKER. The building is of pressed brick, with all the modern conveniences, maps, etc. From the same bank book a library was furnished, costing upwards of $3,000, and containing the standard works. In the rear of the school is a playground with floor and roof, while the campus, as will be seen in the illustration, is not less complete. The walks are granolithic, the hedges and trees perfectly preserved and artistically pruned, while the flower beds during the summer are charming.

After his work in building the school, Mr. Rittenhouse realized the advantages of a hall in which the people of a rural district might be privileged to listen to some of the best talent in music and lecture. His idea soon became a reality. It is called Victoria Hall, and is in keeping with the school house, finished in chestnut and quarter-cut oak, highly polished, and seated with opera chairs to accommodate 350 persons. The buildings are excellently lighted with acetylene gas, the plant occupying a building outside the hall. The caretaker's residence is also built in modern style, and has a complete sanitary system of plumbing and sewerage. In connection therewith is a conservatory, which provides flowers for all the buildings.

With these buildings completed the generosity of Mr. Rittenhouse was not ended. Lincoln county is in the midst of the best fruit-growing section of Ontario, and to the Provincial Government he presented over one hundred acres for an experimental farm, lying immediately adjoining the Rittenhouse school property, and between it and the lake shore.

The people of Lincoln county are loud in their praise of Mr. Rittenhouse, whose modesty has kept him in the background while his plans were being carried out—plans which will give large dividends in the lives of the coming generations.

Messrs. L. H. Ford, L. Larson and H. Stubee, of Minneapolis, Minn., have signified their intention of establishing a large sash and door factory at Fort Frances.

CORRESPONDENCE

LUMBER CONDITIONS IN THE WEST.

WHITEMOUTH, MAN.,
March 16th, 1907.

Editor CANADA LUMBERMAN:

Dear Sir,—Will you kindly accept my best thanks for your fairness upon the supposed lumber combine in the West, and more particularly in British Columbia? Few men know better than I do what the lumbermen of the West have gone through. I had the pleasure of shipping the first car of lumber to the City of Winnipeg, August, 1880, and continued for 25 years, and for 13 years night and day, which makes a total of 38 years, and during that time I must say that the result was often disappointing, and the remuneration but meagre for the work done. The party who is pushing his good offices for the good of the Western farmers has seldom shown a great interest in the welfare of the farmers of Manitoba unless well paid for the same by the Government of Canada and the Province of Manitoba.

VICTORIA HALL AND LODGE, JORDAN HARBOR, ONT.

It is very unfair to a class of men who have to struggle with the roughest side of life, and who have to stand up against great odds.

I have had a large experience with men, and I must say that, taking lumbermen as a whole, you cannot find a better class of men in Canada.

Again I thank you for your well-worded criticism.

Yours faithfully,
DAVID ROSS.

THE CULLING OF SAWLOGS.

LITTLE CURRENT,
March 14th, 1907.

Editor CANADA LUMBERMAN:

Dear Sir,—I have read more than once the able and candid article of Mr. B. F. Kean, of Orillia, on the difficulties attendant on a culler's work. It is very suggestive—both in what it states and equally so in the points omitted. He praises the Act for protecting the culler from coercion by the lumberman; but he neglects to state that he is dependent on the lumberman alone for his salary. How can he be independent of the man or firm who is his employer and paymaster? Only by paying as well as authorizing the culler can the Government expect them to perform their duties in the spirit of the Act. I could mention an able culler, who scaled for jobbers in my vicinity. He was discharged by the owner of the berth, not because his scale fell short in sawing, for it cut more than he returned, but it did not overrun enough to satisfy the lumberman. That culler has failed to find employment since; and the jobbers failed next season, owing to the cut scale of the new culler. Was that coercion?

Another culler, who was employed by the Crown Lands Department, told me that he was once employed by a sawmill in Peterboro' county with the express understanding that when his scale failed to double in the mill he might look for a new employer—and he did. I believe that no man is really competent to scale logs till he has sold as well as bought logs, and feels how a settler or jobber must do when a culler is cutting down the recompence of his toil with a Doyle rule on small logs.

"A false weight or measure is an abomination to the Lord," and no man can justify the use of the Doyle rule below two feet diameter. In the "Woodsman's Handbook," Part I., Bureau of Forestry, United States Department of Agriculture, we find that the Doyle rule was "originally intended that in the use of this rule the average diameter of the log should be taken, but the usual custom is to measure the diameter inside the bark at the small end." When you deduct 4 inches for slab and one-quarter of remainder for sawdust in a 6-inch log, you leave only 3 square feet in a 12-foot log. The St. Clair rule, general in the Western States, gives 14 feet; the Champlain rule, generally used in New England, gives 17 feet, and another 18 feet. Can all these be correct? If not, which is nearest? The adoption of the Doyle rule by Ontario is responsible for a greater waste of our lumber wealth than any other one cause. It leads to carelessness by the large operator, getting his pine so cheaply; and it discourages the settler from saving what little he may have when he has been swindled out of 20 to 50 per cent. of his cut by a cute culler a few times.

Until the Government adopts a scale which will cut ten hundred feet board measure to the thousand and no more you will never induce the farmer to reforest waste land or save any still uncut. A just standard is equally necessary in selling logs as in grain or cloth. Let our Honorable Minister of Lands and Mines grapple with the question, and a great step towards economy in our timber assets will have been taken.

THOMAS FROOD.

THE BEST HEADING MACHINE.

THE CANADA LUMBERMAN AND WOODWORKER has been asked the following question: "Which is the most satisfactory machine to cut hardwood heading—a self-acting or a swing machine?"

Heading manufacturers prefer a swing machine for hardwood heading, and also for most softwood heading. The reasons for this are, that with a swing machine you can see every board as it is cut, and can turn your bolt so as to get the most of the No. 1 heading out of it. Whereas if you use a power machine you have to run the bolt right through, and very often this makes knots in the centre of the boards, putting them in the No. 2 grade. For clear stock, either hardwood or softwood, an automatic machine is all right, but for timber, whether hardwood or softwood, where there are defects, a swing machine is the best, as it can be manipulated so that the defects will come on the edge of the boards, and be jointed off. That is where the great advantage of the swing machine comes in, as hardwood which is used for heading is usually defective, and a swing machine is almost universally used.

INTERIOR OF VICTORIA HALL, JORDAN HARBOR, ONT.

Annual Convention of the Canadian Forestry Association

There was a large attendance at the eighth annual convention of the Canadian Forestry Association, held in the Railway Committee Room of the House of Commons, Ottawa, March 14th and 15th. President E. Stewart occupied the chair.

The report of the Board of Directors referred to the forestry conventions held at Vancouver, B.C., and Fredericton, N.B., and stated that it was proposed to hold a convention at Yarmouth, N.S., in the near future.

MEMBERSHIP.

The membership of the Association was reported as follows:—

	1906.	1907.
Ontario	368	373
Quebec	225	229
New Brunswick	77	84
Nova Scotia	67	68
Prince Edward Island	6	5
Manitoba	115	115
Saskatchewan	53	61
Alberta	90	83
British Columbia	85	120
Yukon	2	2
Newfoundland	1	2
United States	56	61
Other countries	13	19
	1,158	1,222
Increase in past year	64	

The receipts for the year were $2,138.12, and the expenditure $1,239 08, leaving a balance of $899.04. The thanks of the Association are due to the Governments of the Provinces of Quebec and Ontario for grants in aid of its work.

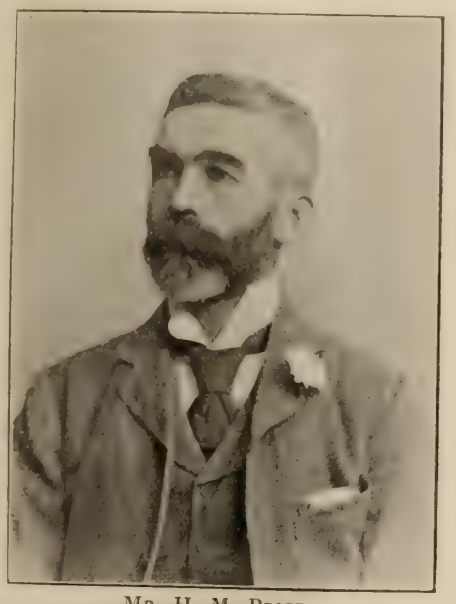
FOREST RESERVES AND TREE PLANTING.

A Forest Reserve Act was passed by the Dominion Parliament at its last session. It set apart twenty-one reserves on Dominion lands, six in Manitoba with an area of 2,288,160 acres, four in Satskatchewan with an area of 413,600 acres, three in Alberta with an area of 107,520 acres, eight in British Columbia with an area of 529,920 acres, aggregating 3,420,200 acres With the Rocky Mountains Park, Yoho Park and Glacier Forest Park, the total area of reserves of Dominion lands is 7,200,000 acres. These reserves cover some of the most important water sources in the West, and including, as they do, lands generally unfitted for agriculture, they will be devoted to furnishing a permanent timber supply to the people. Special examinations are being made of the timber on these reserves, so that the plans for dealing with the timber may be made scientifically and so as to produce the largest results.

An important piece of legislation is the Act passed by the Legislature of New Brunswick, entitled "An Act for the better preserving and protection of the public domain." It authorizes a complete survey of the Crown timber lands of the Province, estimated at 10,000 square miles, the classifying of such lands, with a description of the character and quality and an estimate of the quantity. There is also to be made an examination of the streams to show to what extent they can be used to facilitate lumbering operations, and also whether there is any necessity for taking measures to store or conserve the flow. The agricultural lands are to be designated and surveyed into one hundred acre lots The Lieutenant-Governor is authorized, on receipt of the report, to make such regulations as may be deemed necessary to properly protect and encourage the lumber industry and to preserve the various timber areas of the Province.

The tree planting on the Western prairies, under the Dominion Forestry Branch, is steadily developing. During the past year 2,000,000 trees were distributed and the total distribution since the beginning of operations, including the present year, will be 9,000,000 trees.

The existence of the Canadian Forestry Association is due to the initiative of Mr. E. Stewart, who launched the project for its



MR. H. M. PRICE,
President Canadian Forestry Association.

formation shortly after his appointment as Superintendent of Forestry for the Dominion, and a great part of the credit for the advanced position of the forestry movement in Canada at the present time is due to the persistent advocacy of its principles by Mr. Stewart, in his official position, and in other ways. It is, therefore, a matter of regret that Mr. Stewart has found it necessary to sever his connection with the forest service of the Dominion, but in doing so he can feel, and he is to be congratulated on the fact, that he has initiated and placed on a stable basis one of the most important movements influencing the future prosperity of the country.

PRESIDENT'S ADDRESS.

The president in his address reviewed at some length the progress and growth of the Forestry Association and urged the planting of trees in the older districts. He said:—

The aims of the Association are concisely stated in the constitution. It will be noticed that its objects may be divided into two distinct heads; one is to urge on the Governments, both Federal and Provincial, certain matters that deserve their attention; and the other is to enlist the people as a whole in the cause of forestry. The latter is much the more important object, for if the people are aroused to the necessity for action they will not only act individually but will see to it that the Governments, which are the servants of the people, do their part.

The question is so broad that I can only refer to some few things that might well be undertaken by the community, both individually and through the municipalities. There is the planting of avenue trees along the country roads and lanes, as well as groves on unproductive land; the retaining of wood lots where the farm has not been entirely cleared up. The municipalities should by by-laws encourage the latter by freeing the wood lot from taxation, or at least reducing it to a minimum.

There seems to me to be an opening in these older Provinces, he said, for enterprising nurserymen to engage in a profitable business in growing forest nursery stock on a large scale, and not only for growing trees but for collecting forest tree seeds for sale. The Forestry Branch has within the past few years received frequent enquiries for seed of the white pine, and one lumberman in particular imported several thousand coniferous trees, some of them of white pine, from Germany, as well as seed of the same varieties. Owing to the length of time in reaching him, and perhaps lack of care in the transport, very few of the trees lived, and he is now making enquiries from nurserymen in the United States for another supply to plant up waste ground on his limits.

If nurserymen are not disposed to undertake the growing of this stock, the Provincial Governments might, for the advantage that would result to them of having the denuded limits replanted where natural reproduction is impossible, establish nurseries for that purpose, charging the limit holders the actual cost involved in the work. Certainly any plan that will tend to increase the growth of our valuable timber trees is worthy of public attention.

I have on former occasions referred to another matter that I am more than ever persuaded would be in the public interest, and that is, that in the granting of patents of wooded land a proviso should be inserted that at least 10 per cent. of the area conveyed should be retained by the patentee in forest; that the timber should belong to him for his own use, but to be used only so as not to impair the forest.

When this year's distribution has been made there will have been planted on the made there will have been planted on the homes of the prairie settlers 9,000,000 trees under the Government co-operative scheme; in other words, sufficient to plant a solid

block of 3,300 acres four feet apart, or, if planted eight feet apart, to cover 13,200 acres. Eighty-five per cent. of those sent out were found a year ago to be living; that would be 2,859 acres four feet apart, or 11,220 acres if they were planted eight feet apart; or about one-half of a Northwest township. If those that live were planted eight feet apart along the C. P. R., there would be two rows on each side of the track from Montreal to Vancouver.

But the direct benefit of this work is not all that was aimed at. The educative effect of the success that has attended the work must stimulate the prairie settlers to continue the work on their own account.

FOREST RESERVES.

We have now some twenty-one forest reserves set apart by Act of Parliament, but we have as yet only made a beginning in this direction. Three very important areas have been reserved along the west side of the Province of Manitoba and the east boundary of Athabaska, but no time should be lost in taking steps to reserve the whole timbered area along the east slope of the Rocky Mountains, in order to preserve the forest there for the conservation of the water for the great rivers that are supplied from this source.

In discussing the address, Prof. Macoun emphasized the importance of protecting the eastern slopes of the Rocky Mountains; if the slopes of the Mountains were denuded of timber, the flow of water in the rivers that rose in the Mountains and watered the prairies would be seriously lessened, and the farmers on the prairies would suffer.

Mr. Stewart spoke of the mistaken impression, held in many quarters, of the object of the forest reserves. The idea in making a reserve was not to prohibit cutting but merely to regulate it so as to secure a permanent supply.

Mr. R. H. Campbell praised the action of New Brunswick in its recent legislation, passed with a view to getting more information about their forest land. Exploration should be carried also in the northern territories of the Dominion

Mr. E. J. Zavitz spoke of the excessive cost of forest tree seeds. With white pine at $2 to $2.50 per pound, he had found it cheaper to import white pine seedlings from Germany than to raise them from seed at the Ontario Agricultural College. Red pine seed was also needed. He advocated the removal of the duty on forest tree seeds and seedlings. His department had made twenty-two plantations in Ontario.

Mr. W. C. J. Hall, Superintendent of Forest Reserves of Quebec, mentioned in an address of interest that an order-in-council was to be passed creating a forest reserve about Ottawa from Riviere du Loup to the Ontario boundary. Mr. Henry Lovell, one of the oldest lumbermen of the Dominion, spoke of the depletion of the forests in the east. "I would suggest," said Mr. Lovell, "that prison labor be utilized in the re-foresting of waste lands. There would be no competition with free labor in such a scheme."

Valuable suggestions were added by Mr. W. B. Snowball, E. G. Joly de Lotbiniere, Mr. John Macoun, and others, and at the afternoon meeting Hon. W. C. Edwards opened an interesting discussion on "Exploration in Advance of Settlement."

Hon. Mr. Mr. Edwards emphasized the fact that the forests were not "inexhaustible"; a change had come over the popular feeling which so regarded them. Nevertheless, Canada could so manage her forests as to maintain a supply for herself for ever though she might not be able to keep up an export trade. He compared the forest policy of Canada with that of the United States, pronouncing strongly in favor of Canada's policy. Yet the policies of some of the provinces were not without faults. Ontario was pursuing a "suicidal policy" in compelling the taking off of the timber within a short period of years. The Maritime Provinces, where twenty-one years was given for this purpose. were a little better. Quebec, however, was pursuing a more rational policy than these others, practically giving a tenure forever to the holder of a limit, provided he kept within certain restrictions imposed by the province. These restrictions were that he should not cut any pine under twelve inches on the stump. and spruce under eleven inches on the stump.

The enormous damage to timber had been much lessened by the adoption of the fire-ranger system, the credit for initiating which the speaker gave to Ontario. He thought it safe to say that if care were exercised in cutting, especially by lumbermen, Quebec might have a large supply of spruce in perpetuity. He was himself interested in a timber limit of some 1,600 square miles in the Gaspe district, where they proposed to erect a mill and remove only the annual growth on the limit; they would probably not cut under 11 inches. He thought that limit would not only not deteriorate, but would steadily grow more valuable.

The lumbermen were not the "arch-enemies of the forest." They waged war with the illegitimate cutting of timber under pretence of settlement.

Quebec's water powers and timber resources gave her great prospects. But if the forests were removed, both the water powers and the timber would go. There was a difference of $130,000 between the cost of running cement mills of the same capacity, the one at Ottawa and the other at Durham, Ont., this difference being in favor of the Ottawa mill. This was due to the fact that the Ottawa mill was run by waterpower, while at Durham they were compelled to use steam power. The great manufacturing centre of the continent would, he believed, move north, and Quebec would have the largest share of the manufacturing, though Ontario would have a good share, too.

The country should be thoroughly explored and divided into that suitable for settlement and that suitable only for forests. They must not risk the destruction of the forests by letting settlement encroach too near to forest regions. When these kinds of land were both well represented in an area, this area should not be thrown open for settlement until all the other available agricultural land was exhausted.

In times past lumbermen themselves had been responsible for many fires, due, for instance, to the neglect of camp-fires on drives. Legitimate settlement, through settling fires to clear land, had been responsible for a great many fires; but the worst cause of fires had been illegitimate settilng or squatting. He instanced a case where, in order to clear a plot of land whereon to raise, say, $5 worth of potatoes, a fire had been set which, before it was put out, had caused a loss of millions of dollars to standing timber in that district. Lumbermen nowadays, however, were careful, and fires used on the drive were usually carefully extinguished. Campers were also often the cause of fires.

For the prevention of fires patrol was probably the best general scheme, though perhaps more stringent laws were needed. Another necessary measure was the absolute prevention of squatting within timber limits and also of settling for agricultural purposes on land too near the forest areas.

In order to maintain the forest in perpetuity, a diameter limit must be enforced. The speaker's experience was that spruce should not be cut under eleven inches, as was provided for in the Quebec regulations. With pine, the case was different. Reproduction was not so good, especially in a mixed forest. Pure pine forests might, perhaps, be cut in perpetuity. On the Edwards limits no pine was cut under 14 inches on the stump.

It was of the very highest importance that reproduction of white pine, above all other trees, should be secured.

This the speaker would secure by preservation and careful cutting. Planting should be done where necessary. Where the timber had been all cut off, planting or sowing should be resorted to.

Mr. J. B. Miller emphasized the necessity of keeping settlement out of forest regions; this resulted in many forest fires, which arose from the fires being set to clear land. A little calculation would show that the Ontario Government, from the limit of 36 square miles in area, sold a few days before, would get in all $626,000, a sum far larger than they would realize if the land were thrown open to settlement. Under present conditions it was risky to make any calculations more than eight years in advance. Nowadays tourists started practically all the fires. The Indians seldom or never did this. From the two new railways being built last year no fires had arisen. The speaker also emphasized the comparatively small supply of timber in Canada at present; in order to supply one year's demand of the United States, he said, the whole country would practically have to be denuded.

Mr. McAllister, M.P., Mr. W. A. Charlton, ex-M.P., Mr. J. C. Snowball, Mr. W. C. J. Hall, Mr. A. E. Alexander, and Mr. W. R. White, also took part in the discussion. Mr. W. C. J. Hall exhibited and explained the operation of a spark arrester, which had given

excellent results in use during the past summer on the locomotives of the Quebec & Lake St. John Railway.

THURSDAY EVENING.

On Thursday evening a lecture was delivered in the Railway Committee Room by Dr. B. E. Fernow, his subject being "The Aim of the Forester." It was a thorough exposition of the aims of the forester in raising the timber supply. In one respect, i.e., in regard to his harvest, the aim of the forester and of the lumberman are identical. The forester, however, had to look forward to a continued production of trees on the same land, and was not satisfied, as was the lumberman, with taking off only the one crop. The treatment of trees in the forest, the growth of seedlings, the structure of different woods and the decay of timber and other topics were also taken up.

At the conclusion of the lecture a vote of thanks, on motion of Mr. H. M. Price and Hon. W. C. Edwards, was heartily tendered to the lecturer.

SECOND DAY.

At the morning session on Thursday, Mr. W. T. Macoun, horticulturist of the Central Experimental Farm, read a very comprehensive paper, entitled "Some Questions Relating to the Establishment, Maintenance and Improvement of Farm Forestry," basing his statements on what had been done at the Experimental Farm. The subsequent discussion embraced such questions as the methods for the improvement of the wood lot, the species of the trees best for selection, how and when the planting should be done, the cost of operation and the substitution of seeds for planting.

Dr. Fernow criticized the method of taking the measurement of trees as a means of testing adaptability. Mr. Barrett stated that trees can be purchased from German nurseries for $2 per 1,000 and planted at a total cost of $5 per acre, a good financial investment for the state or the farmer. Mr. Stewart thought that there was a field open for collecting seed through lumbermen to supply the German nurserymen.

General business was taken up at the afternoon session, when the following officers were elected:—

Patron, His Excellency the Governor-General; Honorary President, Sir Wilfrid Laurier; President, H. M. Price; Vice-President, W. B. Snowball; Secretary-Treasurer, R. H. Campbell; Assistant Secretary, A. H. D. Ross. Messrs. E. Stewart, G. Y. Chown and W. A. Charlton were added to the present Board of Directors.

RESOLUTIONS.

The following resolutions were passed: —

"That the convention urge the importance of the exploration of the public domain in advance of settlement with the object of determining the character of the lands, so that the settlement may be directed to those districts suitable for agriculture, and which give promise of the possibility of the establishment of permanent and prosperous homes for the settlers, and that the lands unsuited for agriculture should be withdrawn from settlement and permanently preserved for the production of timber.

"That in the administration of such reserves the convention would approve of the policy of having the cutting done under the supervision of properly qualified officers, and that in such operations due provision should be made to ensure the reproduction of the forest.

"That in granting of Crown patents of wooded lands a proviso should be inserted that at least ten per cent. of the area conveyed should be retained by patentee as a permanent wood lot.

"That in view of many important respects in which water supply affects the industries of the country, in particular agriculture, irrigation and manufacturing, and in the increasing value of the water powers owing to the adoption of electricity for industrial purposes, the convention would urge that special means should be taken for the preservation of the forests on watersheds so as to conserve throughout the year the equable and constant flow of the stream dependent thereon.

"That the Government be requested to place forest trees and forest tree seeds imported for re-forestation purposes on the free list.

"That this convention would urge the Federal and Provincial Governments to take steps to encourage as far as possible, both by instruction and by giving facilities for obtaining nursery stock suitable for re-forestation, a more general interest in tree planting, especially on such lands as are at present unfit for ordinary agricultural purposes, and we would further urge the Dominion to make, if possible, further efforts in this direction in the prairie regions, where the results from tree planting are bound to be of inestimable value to the whole country.

"That, in view of the large expenditure made on irrigation works in Southern Alberta and the intimate relation of the flow of the irrigation streams to the forests of the eastern watershed of the Rocky Mountains, this Association would especially urge on the Government of the Dominion the necessity for the protection of the forests on this watershed.

"That the Government of the Dominion be urged to supplement the work undertaken by a committee of the Senate to enquire into the resources of the districts of the West, to the north of the Saskatchewan River, by making a special exploration of such districts to obtain, as thoroughly as possible, direct and accurate information in regard to the resources and conditions of that region; and that in any exploration made each party should be accompanied by an expert timber surveyor, who will be qualified to estimate and report upon the timber.

"That this Association is of opinion that the retention of rough areas under wood and the replanting of areas unsuited for agriculture would be encouraged if some action in the direction of relieving the same from taxation could be put into effect by the local governments and the municipalities.

"That, especially in view of the construction of the Transcontinental Railway and the projection of other lines passing largely through coniferous forests, the attention of the Government of the Dominion and the Provinces, and also of the railway companies, be called to the serious danger of loss of valuable timber consequent upon the construction and operation of lines so located, if all possible precautions to prevent the starting of fires are not taken, and that it be urged that the question be given full and careful consideration; that to the end sought the railway companies constructing and operating such roads should be required to furnish the most modern and efficient equipment and control to prevent fires; that at such seasons as may be necessary it be required that an efficient patrol be established along the afforested line of railway, whether under construction or in actual operation; and further, that the officers, both of the Government and the railways, be required to use all possible diligence to prevent the starting and spread of fires through defective or inadequate equipment, or through the carelessness of the operations or negligence of the employees under their control.

"That this Association learns with pleasure that the Commissioners of the Transcontinental Railway have largely met the recommendations of this Association regarding the protection of the forested areas through which the railway passes.

That the attention of the Governments of the Dominion and the Provinces be called to the danger to the forests resulting from the operating of the prospectors for minerals in the forested districts, on account of the recent great development in mineral exploration, and this Association would urge that measures be taken by which the Governments may be in a position to keep sufficient control of the movements of prospectors to prevent the careless or wilful setting of fires; and that in districts where prospecting is being carried on the fire ranging staff should be specially strengthened in order to deal with the situation.

"That the Executive Committee be, and are hereby, authorized to prepare an amendment to the constitution of this Association for presentation at the next annual meeting, whereby provision may be made for the affiliation of local or provincial Forestry Associations with this Association.

"That the thanks of this Association be and are hereby accorded to the press of Canada for invaluable services in rendering its work so eminently successful, and for the sympathy and support it has always given the forestry movements of the country.

"That the thanks of this Association be tendered to the railway companies, for their kindness in granting reduced rates for the Association meeting, thus aiding materially towards its success."

The conventioned then adjourned.

Characteristics of Timber*

By Prof. Penhallows, McGill University, Montreal.

In the lecture to-night the following points will be discussed:

1. The age of trees.

2. The origin of fractures under artificial and natural strains.

3. Qualities of durability and hardness.

Looking at a transverse section of a small log of lignum vitae a white zone is seen on the outside and this encloses a black interior. The same thing is noticed on examining a transverse section of a hardy Catalpa. These different zones are of importance for we have here the distinction between the light sap-wood and the dark heart-wood.

This difference is of structural importance for the sap-wood is of inferior value for building purposes.

The sap-wood is that part of the tree most recently formed, for in all trees the wood development goes on from the inside of the bark, and so the outer ring gives us the extent of the last year's growth.

This new wood contains the maximum percentage of water, and is the particular part of the wood utilized for the movement of the nutrient fluids. These cells thus have definite functional properties, and if the bark is removed and these become dried up the tree dies. This is also the case if the cells are greatly compressed, and girdling causes the death of a tree in this manner.

The heart-wood, on the other hand, is a dead structure, and its removal does not injure the tree, although it constitutes by far the greater part of the tree. This fact is proven very easily by experiment, and is also confirmed by the numerous cases of living trees with hollow trunks.

The heart-wood is simply a mechanical tissue which is necessitated by the upright habit of trees, and each year's sap-wood is converted into heart-wood.

The sap-wood, being composed of a living functional tissue, contains albuminoid substances which contribute markedly to decay, and so the sap-wood is very susceptible to decay. This is frequently seen in the pines, and is the cause of those streaks which are so deteriorating to building material.

The heart-wood contains no albuminoid substances for it is a dead tissue, and it is in this part of the tree that the mineral substances taken up from the soil are deposited. Thus there is more ash in the heart than in the sap-wood. In some trees pigment is deposited in these mechanical cells of the heart-wood, this being the case in such woods as the lignum vitae, rosewood, mahogany, braizel wood, logwood, etc. This coloring gives the peculiar value to these woods for certain purposes. In some cases the pigment may be extracted from the wood and is of great commercial value, e.g., logwood.

* Lecture delivered before the Natural History Society of Montreal, and published by permission.

Growth rings and their relation to age.

When we look at a cross section of a tree we see rings which are arranged concentrically. There is usually considerable eccentricity which is due to the difference of growth in sun and in shade. The north and the south ends of a tree can thus be easily told by the appearance of the tree when cut. On examining one of these rings under a high power of the microscope it can be seen that there is a broad white portion and a narrow darker portion. These rings are a clue to the age of trees and are known as annual rings. In this latitude one ring is formed each year, the rings being the product of alternating periods of growth and rest. As we proceed farther south there is less differentiation, until in the very southern latitudes many trees show no annual rings, for in those regions there is no rest period. In our trees growth terminates about the first week in July, whilst in the southern countries trees keep on growing the whole year round.

We will now see if there is any way of telling the age of a tree by its size and to do this we will take two illustrations. In Conway, N. H., there is an elm which is 125 years old and which measures 8.27 feet in diameter exclusive of the bark. This gives it a diameter of 344.23 cm. in the metric system and a radius of 172.11 cm. Thus its rate of growth per year was 1.37 cm.

At New Haven we also have famous elms and one of these has a recorded age of 109 years. The diameter of this tree is 149.6 cm. including the bark, or 141.6 cm. without the bark. The radius is 70.8 cm. and the annual rate of growth is 0.65 cm.

Thus it can be seen that the rate of growth per year is very different for these two. Now it is an established fact that different trees grow at different rates, and it can be seen from the above that even trees of the same species do not grow at the same rate. The difference in the rate of growth is due to the difference in conditions and is most frequently correlated with a difference in moisture.

Saco Valley in Conway, N. H., is famous for its elms for it is a most favorable locality for this species of trees and thus the trees there grew at about twice the rate of the New Haven elm which shows about average growth. We thus see that it is impossible to tell the age of a tree by its circumference, the most reliable and practically the only way being by the number of growth rings.

We will now examine sections of different woods microscopically and thus see the minute as well as the gross differences in structure.

Transverse section of Douglas Fir (Pseudotsuga douglasu)—The growth rings are well shown here and in each ring a great difference in the size and character of the component cells is noticeable. We see on one side of the ring a large-celled, comparatively thin-walled tissue which is the spring-wood formed at the beginning of the season during active growth. Then there is a dense wood formed at the conclusion of growth, and this is the small-celled, thick-walled summer wood. Thus each ring is composed of two zones and this makes the annual rings easily visible.

Running in a radial direction we see fine lines which are the medullary rays and which radiate from the centre. These lines are very prominent in hardwoods and give the character of the grain, whilst in pines and other soft woods they are not so easy to distinguish.

In a section of White Spruce (x about 2,000) we can see the component cells very clearly and these show primary, secondary and even tertiary layers of growth in the cell-walls, i.e. in the component elements of the wood. When the wood is acted on in the manufacture of pulp by means of soda or by sulphite of lime the primary wall is dissolved and the secondary walls or cells are separated and come out as fibres. Thus this makes the finest paper and renders the spruce forests of great value.

In another transverse section of the Douglas fir the growth rings are seen to be much thicker. Another element is here noticeable, viz., canals which traverse the length of the wood, resin canals. In the summer woods we find cells which secrete resin, this resin being secreted either in the cavities of cells or in the cell-wall itself. In many coniferous woods, especially in spruces, pines, etc., we get openings bounded by secretory cells, the resin being poured into these openings which are the resin canals. In many cases we find the resin canal filled up with a cellular tissue which blocks the canal.

In a tangential section of the Douglas fir we see the ends of the medullary rays. We also see here how the ordinary wood cells are put together to form the wood as a whole. The wood cells dovetail into one another and this dovetailing occurs at different levels and not in a straight row. This quality gives timber its great elasticity and hence its strength. The medullary rays lie between the wood cells and thus pass through them, establishing a channel for fluids and gases from the surface to the centre of the tree. Resin canals are frequently present in the medullary rays.

Hardness as determined by structure.

The quantity of mineral matter present in the tissue does not materially affect the hardness of the timber. Hardness depends on the quality of the cell-wall and on structure.

The cell-wall is made up of cellulose, the purest form of which is the fibre of the cotton. In the cellulose is about 44% carbon. Oxygen and hydrogen make up the rest.

On comparing the cotton fibre with other wood fibres we note differences in hardness, elasticity, etc. On examining chemically we see a modification of the fibre which is in the line of preservation from decay. The qualities of durability depend greatly on the chemical composition of the component substances.

Lignification is the common method by which nature ensures durability. Lignin is the substance which is infused in the cell wall composed of pure cellulose and a lignified cell contains 65% of carbon instead of only 44%. This means greater durability, for durability of wood is synonymous with the excess of carbon. Cork, commonly known to us in the form of stoppers for bottles, is the bark of a species of oak and is the most durable plant tissue known. In cork we find 70% to 75% of carbon. Other things being equal, the less lignified woods are the most resinous, the most lignified woods are the least resinous.

Coming back to the Douglas fir we find that the more summer wood, which is hard and flinty, the harder is it to saw the log. In the coarser grained varieties of the Douglas fir the summer wood is the most plentiful and that makes them hard to work. The finest grained varieties are the easiest to work and are the most valuable for appearance though not for durability.

On examing a beam of Douglas fir broken in the testing laboratory it is seen that the fracture took place along the face of a growth ring and the spring wood is thrown up in patches. The principal direction of fracture is the grain, i.e. the medullary rays, although breaks also occur at the edge of the thin-walled spring wood. The thin-walled spring wood fractured right along the line of medullary rays.

Star-shapes in seasoning, etc., are determined by the lines of the medullary rays.

In the Black Spruce (Picea nigra) we see a clear differentiation between the spring and summer wood, and we also note resin canals and medullary rays. In tangential section we see the wood cells with their tapering ends interlocking, thus assuring elasticity and strength.

The Bald Cypress (Taxodium distichum) is widely used for shingles and clapboards and also for beautiful interior finish. It is one of the best woods for building purposes.

It has a broad zone of summer wood with dark cells which are resin cells, not resin canals. This gives a resinous character to the wood and the volatile compounds of the resin penetrate the whole wood and give it valuable antiseptic properties.

Common Red Cedar (Juniperus virginiana) is found greatly in Ontario in the region of the great lakes. The spring wood is very wide and shows scattered cells.

A transverse section of Red Sequoia (Sequoia sempervirens) shows dense summer wood and spring wood with specialized resin cells. We also see resin sacs which are distinguished from resin canals by being very much shorter, for they are not much longer than broad. These resin sacs may be produced as a result of injury which is a curious fact. The cells of the medullary rays are very large and very open.

White cedar (Thuza occidentalis) is used greatly for fence posts, telegraph poles, etc. The summer wood here is very thin, and this gives the tree its very workable properties with the saw, etc. This is a quality of soft, uniform grain. Resin cells are scattered through the wood, which is often fine grained.

In white pine (Pinus strobus) there is a predominance of fine spring wood, and here even the summer wood is thin-walled. Hence the wood is very workable.

The summer wood in larch or tamarack (Larix Americana) is broad and the whole structure is flinty. Thus the wood is very unequal and of very hard grain.

Common poplar (Populus tremuloides) is a soft wood. The whole wood is very open and porous. We find that there are large vessels here which convey fluids and gases from the roots to the leaves. In the coniferous woods no such vessels were present for the constituent cells served this purpose. They also served mechanical purposes.

In the broad leaved trees (woods) there is specialization for mechanical and for conductive purposes. The small cells are the mechanical elements. The large vessels serve for conduction. In the vessels air is present for the most part, the water forming a thin layer between the wall of the vessel and the contained air. We often find intrusive cells in these vessels, of the same nature as those mentioned above for the resin canals, and these intrusive cells block up the vessels. The mechanical cells are very fibrous.

The willow (Salix alba) is softer than the poplar because of the larger size and the greater number of the vessels.

In white oak (Quercus alba) the vessels are of enormous dimensions. The wood cells are much more devoted to mechanical purposes than in the soft woods, such as the poplars and willows. The cavities of the cells are nearly obliterated by the great secondary thickening of the cell walls in certain patches. Mingled with these are cells with larger cavities. This explains the unequal grain of the oak. The vessels become filled with intrusive cells, and when this occurs they become functionally useless and are only of service as a means of support and strength. In the white oak there are vast numbers of medullary rays of ordinary size, but every now and then we have very prominent medullary rays, and this is important in cabinet work. This gives the quality of quartered oak.

Red oak (Quercus tinctoria) is a wood of far more uniform grain than the last. The vessels are more uniform and smaller. Although the wood is of much closer grain it is more workable. We have medullary rays of one row of cells and now and again very broad rays.

The live oak (Quercus virens) of the Southern United States is very hard, and was used greatly for shipbuilding before iron came into use.

We thus see that different qualities of hardness and durability depend partlp on chemical and partly on structural qualities.

The marriage of Mr. Charles Henry Gillis, salesman for the E. H. Heaps Lumber Company, of Vancouver, to Miss Florence B. Le Feuvre, of Vancouver, was performed at St. Andrew's Church, Vancouver, on March 16, Rev. R. J. Wilson officiating. Mr. and Mrs. Gillis spent their honeymoon in American coast cities.

AT THE CEDARS.

Duncan Campbell Scott.

You had two girls, Baptiste,
One is Pirginie——
Hold hard, Baptiste,
Listen to me.

The whole drive was jammed
In that bend at the Cedars;
The rapids were dammed
With the logs tightly rammed
And crammed; you might know
The devil had chucked them below.

We worked three days—not a budge!
"She's as tight as a wedge
On the ledge."
Says our foreman,
"Mon Dieu! boys, look here,
We must get this thing clear."
He cursed at the men,
And we went for it then
With our cant-dogs arow;
We just gave "he yo ho,"
When she gave a big shove
From above.

The gang yelled, and tore
For the shore;
The logs gave a grind,
Like a wolf's jaws behind,
And as quick as a flash,
With a shove and a crash,
We were down in a mash,
But I and ten more,
All but Isaac Dufour,
Were ashore.

He leaped on a log in front of the rush,
And shot out from the bind
While the jam roared behind.
As he floated along
He balanced his pole
And tossed us a song.

But, just as we cheered,
Up darted a log from the bottom,
Leaped thirty feet, fair and square,
And came down on his own.

He went up like a block,
With the shock;
And when he was there,
In the air,
Kissed his hand
To the land,
When he dropped,
My heart stopped,
For the first logs had caught him,
And crushed him;
When he rose in his place,
There was blood on his face.

There were some girls, Baptiste,
Picking berries on the hillside,
Where the river curls, Bapstiste,
You know,—on the still side;
One was down by the water,
She saw Isaac,
Fall back.

She didn't scream, Baptiste;
She launched her canoe,—
It did seem, Baptiste,
That she wanted to die too,
For before you could think,
The birch cracked like a shell,
In that rush of hell,
And I saw them both sink.

Baystiste!!—

He had two girls,
One is Pirginie;
What God calls the other,
Is not kown to me.

PROMPT UNLOADING OF TIMBER.

Complaint has been made by the railways that consignees of freight use the cars for storage purposes, thus aggravating the car shortage which has been so pronounced for the past year. This contention is not applicable to the lumber trade. An illustration of the promptness with which cars are unloaded isf urnished by the R. Laidlaw Lumber Company, who last year received over 1,300 cars in Toronto and were not liable for one dollar demurrage.

WESTERN CANADA

Western Offices of The Canada Lumberman,
615 Hastings Street, VANCOUVER, B. C.; 720-721 Union Bank Building, WINNIPEG, MAN.

THE GREAT WEST LUMBER COMPANY

Although for many years past lumbering has been most active on the western slope of the Mountains and throughout British Columbia, also to some extent in the northern parts of the prairies, yet it is only within recent date that the lumber industry has become prominent on the eastern slope and in the foothills.

Mill and Log Pond, Great West Lumber Company, Red Deer, Alta.

One of the companies to grasp the advantage of having a mill plant closer to the market has been the Robinson-Mackenzie Lumber Company, of Cranbrook. These gentlemen have, for some years past, been operating a saw and planing mill plant at Cranbrook. About a year ago they turned their attention to the possibilities of lumbering on the eastern slopes, and decided to commence the manufacture of lumber at Red Deer, Alta. Here they formed what is known as the Great West Lumber Company, Limited. capitalized at $500,000. The head offices of the company are at Red Deer, the Cranbrook plant of Messrs. Robinson & Mackenzie becoming a branch of the Great West Lumber Company.

The timber on their limit on the eastern slope consists chiefly of spruce and pine, of which the company control extensive areas, amounting in all to some 500 square miles, and yielding an estimated cut of over three hundred million feet. The timber, compared with that on the prairies and on the eastern slope of the Mountains, is said to be considerably larger in size, the logs running from 8 to 36 inches in diameter and the average being about 12 inches. The timber grows tall and straight and is exceptionally sound, being free from shake and loose black knots, and lies along the banks of the Red Deer and Clearwater Rivers, which are open for driving throughout the summer.

The company took out about 15,000,000 feet of logs this winter, employing from 75 to 100 men in the camps.

The Great West Lumber Company, Limited, purchased the mill which was formerly owned and operated by Mr. W. T. Bawtenbeimer, of Red Deer. The mill property and yards occupy some 30 acres all told on the banks of the Red Deer River, adjoining the town. The company have expended a large amount of money in constructing a mill pond, which is now capable of holding 100,000 feet of logs at one time. This pond is part of a side channel shooting off from the main river. The intake is about two miles above the mill, the logs being under complete control for all that distance and in all stages of the water. The drop in this log channel also gives them an 18-foot head for water, which they are considering utilizing for the generation of electrical power for operating the mill and for other purposes.

The output of the mill has been greatly augmented by the installation of new machinery. The equipment consists of a rotary saw, with steam feed carriage, having a capacity of 35,000 feet per ten hours, also a new Waterous 6-saw edger, with a complete system of live rolls, trimmers and cut-off saws.

The planing mill contains a new 24-inch McGregor-Gourlay planer and matcher, with re-saws. The power plant consists of one 54-inch by 18-foot boiler, 80 pounds pressure, and a slide valve engine of 125 horse-power.

The filing room is equipped with a Covel automatic grinder. The company have their own mess room and quarters for those of their employees who wish to stop at the mill, although a number of them have their own homes in the town.

The officers of the Great West Lumber Company are:—President and General Manager, Mr. J. W. Robinson; Vice-President, Mr. William Mackenzie: Secretary-Treasurer, Mr. G. W. Green. Mr. D. B. Dulmage is the manager of the Cranbrook branch.

THE PACIFIC COAST LUMBER MILLS.

The syndicate of capitalists which recently acquired the entire plant and timber limits of the Pacific Coast Lumber Company, Limited, at Vancouver, B.C., has been incorporated under the name of the Pacific Coast Lumber Mills, Limited. Mr. G. F. Gibson, who, until about a year ago, was secretary-treasurer of the old company, and since that time has been city comptroller of Vancouver, has accepted the position of general manager of the new

Dam and Log Pond, Great West Lumber Company, Red Deer, Alta.

company, and entered actively on his new duties on the first of March.

The personnel of the board of directors of the Pacific Coast Lumber Mills, Limited, is as follows:—Robert Martin (chairman), Fred. Buscombe, H. T. Coperley, and G. F. Gibson.

The new company contemplate considerable additions to the plant, part of which will be an increase in the steam plant and in the capacity of the dry kilns, bringing the capacity of the plant up to about 175,000

Mr. J. M. Robinson,
President and Manager Great West Lumber Company.

feet of lumber per ten hours.

The plant has been running steadily all winter, with the exception of a short shutdown recently on account of the shortage of logs. Advantage was taken of this closing down to make some necessary repairs.

TIMBER BROKERAGE FIRM.

A new firm, known as Leslie & Crawford, has lately been organized in Vancouver, B.C., for the purpose of engaging in the timber brokerage business. They have taken offices in the Flack Block. Mr. Leslie was formerly a private banker at Stonewall, Man., and has been on the coast and upper country during the past year engaged in looking over timber and coal lands.

Mr. Crawford was formerly a physician in Winnipeg, but has been interested in British Columbia timber and lumber for some time. He was secretary-treasurer of the Taylor-Pattison Mill Company of Victoria for the past year, which concern was sold to the B. F. Graham Lumber Company on the 1st of January this year.

This firm has control of over 600 miles of the best timber lands in British Columbia, and are firmly of the opinión that timber lands are the safest investment in North America to-day. They will also handle mill site properties, and are prepared to give expert advice in these matters. They are also handling car lots of British Columbia lumber products for Eastern dealers, and are putting on a tug-boat and scow to handle the output of some portable mills near Vancouver.

NEW CANADIAN LUMBER COMPANY.

The Campbell-McLaurin Lumber Company has been chartered under Dominion laws with a paid-in capital of $100,000 to conduct a general wholesale lumber business in the Canadian and United States markets. The leading spirit in the organization of this company is Mr. Arthur H. Campbell. Associated with Mr. Campbell in the new company are some of the most influential lumber manufacturing interests in the Dominion and New York State, and the company starts out under the most favorable auspices. The officers of the company are as follows: President, A. McLaurin, of Montreal; Vice-President, H. L. Tibbetts, of Boston, Mass.; Treasurer and Manager, A. H. Campbell, of New York city. These gentlemen, together with Mr. J. D. McLaurin, of New York, and Thomas F. Strong, of Ogdensburg, N.Y., comprise the directorate.

Among the other stockholders are Mr. George Ryon, of Ogdensburg, N.Y.; D. C. Culver, of Albany, N.Y., and M. P. Kinsella, of Ottawa, Ont.

The headquarters of the company will be in the Board of Trade Building, Montreal, where Mr. Campbell will maintain himself in the general conduct and management of the buisness, but will spend a large portion of his time in the Metropolitan District and New York State in connection with the selling end.

The company will conduct a general wholesale domestic and export lumber business in red and white pine, spruce, etc., also lath and shingles.

The launching of this new company is a distinct tribute to the successful efforts of Mr. Campbell in the wholesale lumber trade, and especially so by reason of the exceptionally strong financial interests which have become associated with him in the new enterprise.

Mr. Wm. Mackenzie,
Vice-President Great West Lumber Company.

Mr. Campbell received his lumber education with W. C. Edwards & Company at Rockland, Ont., one of the largest lumber manufacturing concerns in the Dominion, with whom he was associated. Upon the organization of the Robinson-Edwards Lumber Company, of Burlington, Vt., to handle the American business of the Edwards interests in 1897, Mr. Campbell went to New York to represent the selling department of that company.

Lumber Yard, Great West Lumber Company, Red Deer, Alta.

The "Great West" Buffalo.

The Westholme Lumber Company have taken over the saw-milling business of F. S. Lloyd at Westholme.

The British Columbia Timber & Trading Company have commenced the construction of a five-mile railway in their limits on the Pitt River.

THE

Canada Lumberman

AND WOOD-WORKER

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The Canada Lumberman and Wood-Worker is published in the interest of and reaches regularly persons engaged in every part of Canada in the lumber, wood-working and allied industries. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication in the Weekly Lumberman the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the Canada Lumberman and Wood-Worker is undoubtedly the most direct and profitable advertising medium. Special attention is directed to "Wanted" and "For Sale" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

CANADA AS A FIELD FOR LUMBERING OPERATIONS.

The lumber industry of Canada has attracted a vast amount of American capital. This capital has not to any extent been invested in timber limits for speculative purposes, the motive in most cases having been to provide the raw material for sawmilling establishments. The judicious legislation enacted by our Provincial Governments, and commonly referred to as the manufacturing clause, is responsible in no small measure for the satisfactory conditions under which the lumber business of this country is being carried on. It would have been nothing short of commercial suicide to have continued to permit the export of sawlogs to the United States.

The "home manufacture clause" was passed by the Ontario Government in 1898, the chief object being to prevent the export of logs from the Georgian Bay district to Michigan, thus depriving Canadian workmen of the employment furnished by their manufacture into lumber. The situation gave no choice to the American operator. If he had invested in Ontario timber and desired to operate his limits, he was compelled to arrange to have his logs sawn within the province, either under contract or by building a mill for the purpose. The result of this masterly piece of legislation is well known. United States capital was invested in the building of saw mills to a greater degree than was anticipated, and, as a result, many thriving towns have come into existence.

In recent years more attention has been paid to British Columbia, and here, too, the United States lumberman has been prominent. Following the placing of an embargo on the export of logs, as in Ontario, capital from across the line has come in with a rush, and the number of mills has multiplied, many of the new establishments being located in the Mountain district.

The development of the lumber industry has shown the effect of the combined interests, for it must not be assumed that Canadian capital has been idle or that our lumbermen have been less enterprising than their American confreres. On the contrary, they have pursued a policy of expansion in keeping up with the times.

Canada, as a field for lumbering operations still presents great opportunities. Estimates of our mature timber place the amount as high as five hundred billion feet, which, allowing an annual cut of three billion feet, would furnish a supply for our sawmilling establishments for more than one hundred and fifty years, without taking the increment into consideration. In the light of the world's diminishing supply, these figures suggest a bright future for the lumber industry of this country.

TIMBER LICENSES NOT ASSESSABLE.

A judgment of the utmost importance to lumbermen and owners of timber licenses has been given during the past month, the point at issue being the assessment of timber licenses, camps, etc. The question was referred to in the Canada Lumberman and Woodworker, of September, 1906, when the opinion was advanced that the municipalities had not the right to assess the licensee for standing timber on Crown lands. The Court of Appeal has now given judgment to this effect.

The case was the result of an appeal of the J. D. Shier Lumber Company against an assessment of the Township of Lawrence on the value of their licenses, camps, slides and dams. The assessment was confirmed by the County Judge, and an appeal then taken by the licensee to the Court of Appeal. The questions submitted to the Court were as follows :

(1) Are the holders of timber licenses liable to be assessed thereon ?

(2) Are lumber camps assessable ?

(3) Are the owners of lumber camps assessable to a business tax under the conditions mentioned with respect to the camps only ?

(4) Are slides and dams assessable ?

Chief Justice Moss and Justices Osler, Garrow and Maclaren answered all the questions in the negative, holding that the license, camp, outfit, slides and dams are all covered by the sub-section of the Assessment Act which exempts from taxation all Crown interests in lands. Justice Meredith dissented, contending that the licensee has an interest in the lands apart from that of the Crown and that such interest is taxable.

The decision of the Court of Appeal will doubtless prevail, as it is improbable that the case will be taken to the Privy Council. The Ontario Government, in the framing of the law, never intended that the licensees of timber limits, who do not own the timber but in reality have only a license of occupation, should be assessed for taxes. If such a tax were imposed, it would be a serious matter for lumbermen, whose operations are now carried on under increased expenditures which were not originally contemplated and which leave the margin of profit none too great for the investment and risk.

A LUMBER AGREEMENT OF 1866.

By the courtesy of Mr. R. E. Gibson, president of the Conger Coal Company, we are permitted to present below, as a curiosity, a copy of an agreement entered into in 1866 for the sale of a quantity of lumber :

Pine Orchard P. O., Whitchurch.

This agreement made by and between Robert McCormick, of the Township of Whitchurch, sawmiller, of the first, and Thompson Smith & Son, of Toronto, Lumber Merchants, of the second part.

Wherein the party of the first part has sold to the party of the second part, Five Hundred Thousand feet of Clear Fourths and Selects, according to Troy inspection, and Ten Hundred Thousand feet of sound Common ; the Common to be free from Rot, Shake or Rotten or caorse, loose knots, and all to be delivered at Newmarket Station, at some convenient place for loading on the cars, and all to be delivered from this date to the first of October next ; all to be sawn parallel edges and free from stubshot and wane, and all to be what is termed White Pine Lumber.

And the party of the second part agrees to pay to the party of the first part Twenty Dollars per thousand feet, inch measure, for the clear, and Five Dollars and Fifty Cents per thousand feet, inch measure, for the Common on delivery. It is understood that the word "Clear" embraces Clear Fourths and Selects.

Dated at Toronto this 12th day of March 1866.

(Signed)
Robert McCormick.
Thompson Smith & Son.

The lumber was hauled nine miles, from Vivian to Newmarket. The prices make an interesting comparison with those of to-day, when clear pine is worth about sixty dollars, and a mill run box and better from twenty-five to twenty-eight dollars at the mill, representing an advance of about four hundred per cent. in forty years. What will be the price of white pine forty years hence ?

LOSS IN RAFTING LOGS.

An item of expense which is not always taken into consideration is the loss in rafting logs. The manager of a lumber manufacturing business in Minnesota has estimated that during the past seven years his company has lost a quarter of a million dollars worth of timber, thirteen million feet of logs either sinking or breaking away.

Before the Ontario Government placed an embargo on the export of logs, the expediency of towing them across Lake Huron was a much debated question, one firm dismantling their mill in Michigan and removing it to the Georgian Bay. The Saginaw Lumber and Salt Company, after the enactment of the embargo, and recognizing the advantages of being near the market for lumber, decided to rebuild their mill at Sandwich, just across the river from Detroit, which practically meant to tow the logs across the lake. Experience has demonstrated to them that the advantages of being contiguous to the lumber market have been more than offset by the hazard and expense of rafting logs from the Georgian Bay down Lake Huron and the St. Clair and Detroit rivers, and they have decided to remove their mill to Thessalon, in close proximity to the timber to be cut. It appears that the loss has been greater than when the logs were towed directly across Lake Huron to Michigan.

The Lumber Combine Investigation

Some interesting evidence with regard to western lumber conditions has been elicited during the past fortnight in the investigation still in progress before the Parliamentary Committee at Ottawa. Beyond establishing the fact, however, that the enormous increase in the cost of producing lumber has necessitated repeated advances in the prices of all classes of building material, not only in the West but in all parts of Canada, little result seems to have been so far attained. It was shown that wages and living expenses have gone up, the prices of horses and supplies generally have increased, while almost every year sees great timber losses from fires. Moreover, in each succeeding season logs have had to be taken a greater distance to the mill. For these reasons the cost of production has increased from 30 to 40 per cent., under such circumstances as made it imperative that both wholesalers and retailers should mutually resolve to maintain a schedule of prices that would keep pace with their increasing expenses.

During the investigation Mr. A. E. Watts, of the Wattsburg Lumber Company, put some pertinent questions to the different witnesses, which elicited only the fact that local associations of retailers existed in the prairie provinces in order to agree on a uniform price. Mr. J. W. McNichol, of Lethbridge, said that there had been three advances in prices last year, but that, in his opinion, these had merely paralleled the increased cost of production in British Columbia. Mr. S. A. O'Brien, of Strathcona, said he had been in the retail lumber business since 1900, and had never been refused supplies by British Columbia manufacturers. Mr. O'Brien also said that there were three or four other dealers in Strathcona with whom he had conferences from time to time to arrange prices, merely for business guidance. He further stated that there was a general price list in existence in British Columbia. There was a provincial association, but at its meetings prices were not considered owing to the varying circumstances in different towns. Mr. O'Brien said he understood there were mills in British Columbia that were not members of any association.

Mr. J. W. McNichol, managing director of the Enterprise Lumber Company of Lethbridge, Alberta, and a director of the Alberta Retailers' Association, said there had been three advances in lumber during 1906, aggregating about $4 per thousand, and also a further advance this year. It was the general opinion among retailers that there should be a profit of twenty per cent. on the cost of stock. It was therefore the duty of the retailers in their various districts to figure out prices which would accomplish this. In 1904 Mr. McNichol said he had been told the mills had been operated at a loss. This latter statement of Mr. McNichol's was corroborated by Mr. Theodore Ludgate, of Arrowhead, B. C., who said he had been operating at that point for the past five years. Mr. Ludgate testified that during 1905 he ran his mill at a loss, and gave the committee the data upon which he arrived at this conclusion.

Mr. G. P. Wells, secretary of the Mountain Lumber Manufacturers' Association, testified that the prices of lumber in British Columbia were advanced in November 1905, January, February, May, August and September 1906. These advances were from 50 cents to $1, and were necessary as the manufacturers were losing money. Had it not been for fear of outside competition even further advances in price would have been made. Mr. Wells denied that his association had had any relations with the Alberta Retail Lumbermen's Association and with the Coast Association beyond a general understanding that prices must be maintained. A joint meeting of the two associations had been held in Vancouver last September, at which this matter had been discussed.

Mr. Wells further testified that at a meeting of his association, held at Nelson January 27 this year, he had brought up the question as to its legality, and suggested that it might be declared illegal under the laws of Canada. The opinion of Mr. Taylor, K.C., of Nelson, was accordingly consulted, and on his advice the constitution and by-laws were cancelled. This was done owing to their not being in accord with the actual practice and work of the association since its re-organization in 1905, and not made because Mr. Taylor had warned them of the illegality of the by-laws.

Despite efforts to prove the contrary, the testimony of Mr. Wells and other witnesses went to show that no relations existed between western lumbermen and United States associations for the purpose of maintaining exorbitant prices. In fact, it was shown that the Kootenay Lumber Company, which owns a controlling interest in the Enterprise Company, with its eight lumber yards, and also purchases largely from other mills, did not handle United States lumber at all because of its greater cost. Whether this fact was due to freight rates or not the investigation has not shown.

REPAIRING WATERPROOF BELTING.

For many years it had been the great aim and desire of manufacturers of leather belting, as well as others, but more especially the belting industry, to find a good, strong and secure cement which could be used in their business and which would resist damp, moisture, or wetness. They hardly hoped to find one with these qualities which would really resist saturation with water. But they have to-day just such a cement, and nearly every manufacturer of belting makes a special brand of waterproof belting. This waterproof brand is of such a good quality that it can be practically run in water without in any way weakening the joints of the belt. As a rule it is used only in the best grade of belting, as its manipulation requires much more time and care than a glue cement to properly make, and therefore its cost is greater. A hastily made or cheaply made grade of waterproof belting is on that account a very poor investment. As it is coming into very general use, and as it is imperative at present to send back to the shop any such belts in need of repairs or else use the common cement, in which case their moisture resisting qualities are gone, it is deemed proper to give a few simple instructions.

In the first place the ingredients of the cement are generally kept a profound secret, and some of the belt manufacturers even refuse to sell it to their trade, while others will sell it but will not give any instructions regarding how to properly use it, and as the customer generally adopts the same method as applying the hot glue the result is generally a failure. One firm to my knowledge puts the cement on sale in pint cans with instructions how to apply the same with success.

In the first place the parts to be cemented must be scraped clean with a belt maker's slicker, or else a scraper made from an old flat file, heated, turned over at the end for half an inch and sharpened. When thoroughly clean rub it over with a piece of coarse sandpaper or a piece of old card cloth from a cotton mill. This brings the fibre up and gives a better surface for cementing. Next, having your cement at hand (and which, by the way, must be kept well covered when not in use to avoid evaporation, and also kept away from all fire, as it is highly inflammable), give the surface of the leather one coat of cement on both surfaces of the leather which are to come together. Let this first coat become thoroughly dry, which will take from 15 to 30 minutes, then apply a second coat quickly and place neatly together and press tightly. It must not be hammered nor the surface rubbed down, as is usually done with hot glue cement, as any hammering or rubbing of the surface kills the adhesion of the cement, with the result that the joint comes apart in a verp short time, while if done carefully and according to these directions the joint is as good and strong as any part of the belt. It is best to cement only a short piece at a time, letting it set fifteen minutes or more before removing the pressure from the joint and several hours before putting the belt into use. For this reason it is best to cement or make such repairs after shutting down at night, so they may set till morning, or, in the case of paper mills they could be done on Saturday night or Sunday morning. A pair of belt clamps will make an excellent press for this cement, or a couple of pieces of heavy plank bolted through on the ends can be used all right. In either case three or four thicknesses of burlap or sacking or a few sheets of paper must be put between the boards or clamps, so that any unevenness in the leather may be compensated for and the pressure be exerted on the whole surface.—"J. F. C.", in The Paper Trade Journal.

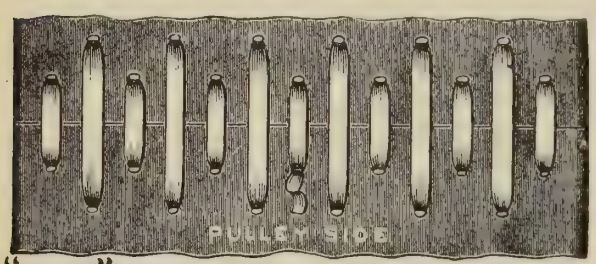
ARE THEY READ?

If a manufacturer should advertise, however modestly, some article at a price he would rather not sell at, he would never again wonder whether, after all, his advertisements are read.

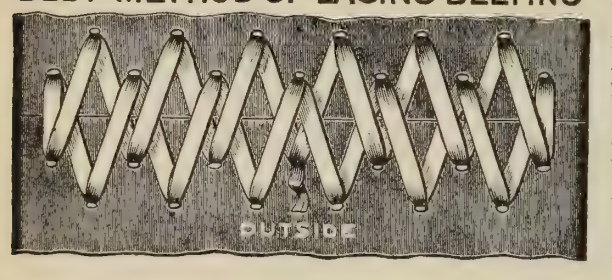
THE PROPER CARE OF BELTS

By J. Crow Taylor.

The main care the average belt gets in the small wood-working institution is to have new laces put in when the old ones wear, and to have a piece cut out and the belt made tighter when it fails to pull its load. Moreover, belts running on a moderate load don't need a great deal of attention, still a little attention is worth while, as one not only gets better service out of the belt, but increases its life of usefulness. One should really strive in the first place to keep the belts as slack as possible, that is, have a belt just tight enough to do its work with a fair factor of safety and no more. There are more belts ruined by being made unnecessarily tight than are worn out in actual service. Keep the surface of the belt in good shape and it won't have to be as tight as when left unattended. If you are running a leather belt and it gets dirty from an accumulation of dust, oil, etc., take the time and trouble to clean it. To cut the



"BEST" METHOD OF LACING BELTING



grease and loosen the dirt, use a mixture made of three parts of benzine, naptha or gasoline and one part of turpentine. If you are afraid to use this, or its use in the shop is not permitted, because of the danger of fire, explosion, etc., use the turpentine alone to loosen the grease. After the belt is cleaned and dry (and this stuff dries quickly), apply a light coat of some good belt dressing, or in the absence of that, a little castor oil. The majority of mineral and vegetable oils are injurious to belts and should not be used. They are used quite extensively though; in fact, it's quite a practice in most shops to take the lubricating oil and pour some on belts that seem to need limbering up. That is not a good practice. The best treatment is to clean all the oil and dust off with the mixture mentioned above, and then apply some good belt dressing, but, in the absence of this, castor oil or a little tallow.

The mixture mentioned is for cleaning leather belts and should not be used on rubber belts, because it will cut the rubber. You can clean rubber belts with a little soap and water, but use it sparingly so as not to injure it. What you want to do is to take off the grease and dirt and not take off any of the rubber. To make a rubber belt more pliable and stick to the pulleys better, moisten it lightly on the inside with boiling linseed oil. Don't use animal oil or grease on rubber belts.

Width of Belt.	Punch first row of lace holes from ends of belt.	Punch second row of lace holes from ends of belt.	Centres of outer holes on the row nearest the ends of the belt to be distant from each edge of the belt.	Size of lace leather to be used.
2 to 4 in.	3/8 in.	3/4 in.	3/8 in.	3/16 in.
6 " 8 "	1/2 "	1 "	1/2 "	1/4 "
10 " 12 "	5/8 "	1 1/4 "	5/8 "	5/16 "
14 " 16 "	3/4 "	1 1/2 "	3/4 "	3/8 "
18 " 20 "	7/8 "	1 3/4 "	7/8 "	7/16 "
22 " 24 "	1 "	2 "	1 "	1/2 "

In the lacing of belts there are so many different methods, and their claims for superiority are so confusing and generally obperiority are so confusing and generally obscure that a study of them becomes more tiresome than enlightion of what one of the leading belt manufacturers considers as the best method of lacing. They do not go into details as to why they consider it the best, but it is known to be a very good form of lacing, and as it is very simple it doesn't tax one's power of imagination to work it out like some of the methods which resemble a Chinese puzzle. If you have some other method that you like best, all right. There are plenty of them, and you can take your choice. But, if you haven't formed any set ideas of your own on this subject, the method illustrated may appeal to you, as may also a table for spacing holes for the lacing of rubber belts given by the Boston Belting Company.

Also here's a simple shop kink that may be worth something to you, and it may not. When you have trouble about threading the end of the lace leather through the holes, try lighting a match and burning the end of your leather with it. A little burning will usually make the end hard and stiff, so that it will serve as a sort of needle and it may be readily pushed through the holes. Of course a part of the lace string that is burned is ruined and will have to be cut off, but that is generally what you do with the tips anyway after the lacing is done, cut them off. Try this kink once, just for a change, and see how it works.—American Carpenter and Builder.

Messrs. Telford & Flater are erecting a new sawmill plant on the south shore of False Creek, between Oak and Laurel streets, Vancouver. The mill is a circular one, and when completed will have a daily capacity of about 40,000 feet. Besides the mill proper, there will be the planing mill and dry kilns. Mr. J. N. Telford, one of the partners, comes from Prince Albert, Sask., where he was connected with The Telford Lumber Company, while Mr. I. B. Flater, the other partner, was formerly with Cook & Tait, Vancouver.

NEW WINNIPEG FIRM.

We present herewith portraits of two Winnipeg lumbermen who have recently opened out for themselves, Messrs Tomlinson and Mitchell. Both these gentlemen have had considerable experience on both sides of the line.

Mr. W. B. Tomlinson was general manager

Mr. W. B. Tomlinson,
Of Tomlinson & Mitchell, Wholesale Lumber Dealers, Winnipeg.

and treasurer of the Red Deer Lumber Company, and Mr. F. H. Mitchell was also with the latter company for some time. They have secured an elegant suite of offices in the new Empress Block, 354 Main street, Winnipeg, where they will be pleased to see

Mr. F. H. Mitchell,
Of Tomlinson & Mitchell, Wholesale Lumber Dealers, Winnipeg.

their old friends as well as new ones. They will devote their attention entirely to the wholesale lumber business.

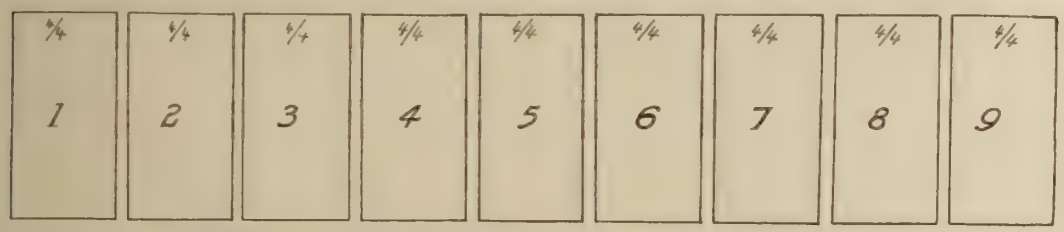
A serious accident occurred in M. McNair's mill at River Louison, N.B., recently, when an employee named Esligar was caught in the shafting and badly injured.

The new planing mill of T. N. Ruston Planing Company, at Stratford, Ont., has been completed. The new building is 50 x 90 feet and two stories high, the engine room being in a separate building. The mill is equipped with modern appliances, such as dust collectors, hot air fans, etc.

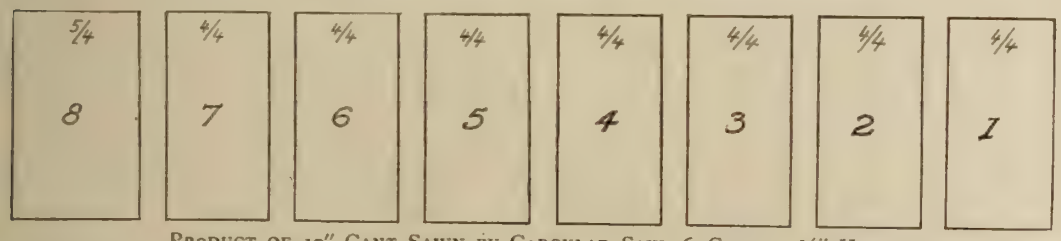
BAND VS. CIRCULAR

The following additional opinions have come to hand on the question of the advisability of installing a circular or a band saw for cutting 1,500,000 feet of red and white pine logs averaging from 15 inches to 18 inches and 1,500,000 feet of jack pine logs averaging about 10 inches:—

Geo. Bellinger, general superintendent Algoma Commercial Company, Sault Ste. Marie, Ont.: "Answering your question of the preference of circular or band saws, with the two different cuts as mentioned, I am decidedly in favor of the band as most desirable, if any, on account of the difference in the amount of stock sawn from the same amount of logs by the band or circular, the difference being at least 8 per cent. in favor of the band, the result of the saw kerf on the ordinary band of 14 gauge, it being one-eighth inch, and the circular one-quarter inch. Leaving any other benefit that might be gained by using the circular—and I cannot recall what it might be—in my opinion the saving on lumber would justify a decision in favor of the band saw. I am sending you a diagram of the ten inch cant, as sawn by the circular and band saws. You will readily see the difference in favor of the band, and larger cants more in proportion."



Product of 10" Cant Sawn by Band Saw, 14 Gauge, ⅛" Kerf.



Product of 10" Cant Sawn by Circular Saw, 6 Gauge, ¼" Kerf.

Mr. Marshall, Alfred Dickie Lumber Company, Stewiacke, N.S.: "Regarding the best way to manufacture pine logs, you did not state whether you required these logs to be cut into boards two inch, three inch or one-half stuff. I have had very little experience with a band mill, but I know a good stock gang for cutting boards is hard to beat. Of course, if you had only a matter of three millions to cut, it would not pay to put in a good stock gang. A rotary or twin rotary would be my idea, provided three millions would be the total cut."

Donald Fraser & Sons, Plaster Rock, N.B.: "We would recommend the band saw."

Scott Lumber Company, Fredericton, N.B.: "Regarding the manufacture of white and jack pine, we manufacture every year quite a large quantity of these two woods by stock gang, which gives extra satisfaction. We have manufactured a quantity of pine with circular saw, but find the best satisfaction from the stock gang."

Rainy River Lumber Company, Rainy River, Ont.: "If a person has the privilege of having his logs sawed with a band saw or rotary saw, there is no question but what the advantages are greatly in favor of having the logs sawed with a band saw, for the reason that if sawed with a band saw into inch boards, the logs should produce about ten per cent. more lumber than if sawed with a rotary. If sawed into two inch or timbers, of course the advantage would not be quite as great. If, however, a person had 3,000,000 feet of logs, and was obliged to build a mill to saw them, it might be to his advantage to have them sawed with a rotary, for the reason that a small saw mill to cut 3,000,000 feet of logs equipped with a rotary saw could be built much cheaper than one equipped with a band saw; besides, it requires higher priced men to operate a band saw than it does a rotary.

J. D. Shier, Bracebridge, Ont.: "Re the cutting of red and white pine saw logs of stated diameter, also jack pine logs averaging a certain size, we would say a band saw would be preferable, as you will save an eighth in sawdust in every cut you make with the saw, which will tell just as much on a small log proportionately as on a large log. Some take exception to this; they say there is a difference in the saw kerf between a band saw and a circular, that it does not make so much difference in small logs. This statement is not correct, as a circular saw will just take as wide a saw kerf in a small log as in a large one, and the difference at least is 1,000 feet in 10,000 feet saved in sawdust, which is a very large item at the present value of pine timber. Secondly, I think the band saw, if kept in proper order, will just carry as much feed as a circular will, besides it makes nicer and evener lumber if properly handled. If it were not for the thickness of the saws on the gang edger, that would certainly be the speediest way. The stock could be also cut to very good advantage by siding them down on a band or circular and then putting them through a nice pony gang with fourteen gauge saws, which would be equal to the usual gauge of band saws."

PERSONAL.

Mr. E. H. Heaps, of Vancouver, B.C., is at present on a visit to Eastern Canada and the Eastern States.

Mr. G. F. Clarkson has been appointed general manager of the Vigars-Shear Lumber Company, of Port Arthur.

The death occurred at Miami, Florida, on March 15th, of Mr. P. Potvin, planing mill owner and box manufacturer, Midland, Ont.

Mr. W. Taylor, for many years engaged in the lumber business, died at his residence at Simcoe, Ont., on February 27th, in his 88th year.

Mr. W. L. Linklater, a former resident of Wapella, Sask., has been appointed manager of the Imperial Elevator Company's yard at Arcola, Sask.

Mr. A. O. Cruickshank, who for some years was engaged in the lumber business, died after a month's illness at his home at St. John, N.B., on March 11th.

Mr. J. Dempster, of Dempster's Mills, Halifax, N.S., and Mr. R. Davidson, lumber merchant, of the same city, have left for an extended trip in the West Indies.

Mr. Bruce McKay, of Parrsboro, N.S., formerly a member of the firm of the Fox River Lumber Company, has left for Calgary, Alta., where he will engage in business.

Mr. H. L. Sipes, formerly connected with the Porto Rico Lumber Company, has become a partner in the real estate firm of Williams, Sipes & Company, of Moose Jaw, Sask.

Mr. J. A. Fitzhenry, a member of the Craycroft Lumber Company, met with an accident while engaged in the company's limits on Craycroft Island, from which he died on March 18th.

Mr. Thomas Gilson, who, for some time past has been travelling salesman for the Rat Portage Lumber Company, has accepted a position with the Pacific Coast Lumber Company, of Vancouver, and will have his headquarters at Winnipeg.

Mr. Alexander Gibson, the well-known millionaire lumbermen of Marysville, N.B., has recently been seriously ill. He is 87 years of age, and little hope is held out for his recovery. In addition to being a large lumber operator, Mr. Gibson has been quite a factor in railroad building in New Brunswick.

Messrs. G. Young and E. T. Barnham, two timber cruisers, had an exciting experience at Lake Coquitlam, B.C., recently, when they were attacked by three bears. They came out victors, however, and have now in their possession three fine bear skins as a momento of their fight.

The staff of the Forestry Branch of the Dominion Government recently presented Mr. E. Stewart with a gold cigar cutter and silver cigar case. Mr. Stewart resigns the superintendency of the branch to become managing director of the British Columbia Timber Limits Company, with head office at Montreal.

Mr. Dan Wilson, the bright and energetic head of Wilson Bros., Collingwood, Ont., recently favored The Canada Lumberman and Woodworker with a call. He reports that their business is steadily growing, and now extends over almost the entire Dominion. They are about to give more attention to the manufacture of hardwood flooring, for which the demand in Canada is increasing very rapidly.

THE NEWS

ONTARIO.

The Keewatin Lumber Company, Keewatin, have completed their new planing mill.

Mr. J. B. Atchison, sash and door manufacturer, of Cornwall, is reported to have assigned to Mr. R. S. Cline.

The Preston Lumber Company, of Preston, have added building and contracting departments to their lumber business.

Aitchison & Company, lumber dealers, of Hamilton, have recently purchased additional property, which will be used for business extensions.

A new retail lumber yard has been opened at Hagersville by Mr. H. McDonald, formerly of the International Harvester Company, of Hamilton.

It is stated that the International Veneer & Lumber Company, of Philadelphia, will establish a factory at Arnprior, Ont., if given some inducements by the town.

Canadian patents were recently granted to Mr. I. N. Kendall, of Ottawa, on gang circular sawing machines, and to Mr. H. W. West, of Victoria, B.C., on saw sets.

The Seaman-Kent Company, Limited, have removed their Toronto office from 160 Bay street to the Stair Building, 123 Bay street, where larger and better quarters have been secured.

The dam of Boyd & Blakely, planing mill proprietors, Flesherton, Ont., broke away on March 13th for the second time this year. The new dam has just been completed, and they were about to open the mill again.

The Peninsula Tug & Towing Company, Limited, were recently granted a license by the Provincial Government to transact business in the Province of Ontario. Mr. F. Wood, of Wiarton, has been appointed attorney.

The factory of the Manning Wood Fibre Company, located in the township of Brooke near Owen Sound, Ont., was destroyed by fire on March 17th. The business was recently purchased by Mr. A. E. L. Malone and associates, and considerable money had been spent in improving the plant.

Mr. David Stevia, who has been a contractor and builder in the town of Hanover, Ont., for a number of years, has purchased the well-known Chesley planing mills, which he will operate in addition to his contracting and building business. Under the new management the continued success of the Chesley planing mills is assured.

The Provincial Government have granted a charter to the Dominion Lumber Company, Limited, whose headquarters will be in the Town of Webbwood. The authorized capital is $350,000, and the provisional board of directors consists of E. B. Ryckman, C. S. McInnes, C. C. Robinson, Margaret Gleeson, and Annie E. Lloyd.

Mr. R. H. Roys, president of the Saginaw Lumber & Salt Company, operating a sawmill at Sandwich, Ont., has disposed of his entire interests in the mill and pine timber holdings of the company in Ontario to Ralph and D. K. Loveland, who have associated with them some eastern capitalists. It is understood that the mill, which cuts about 25,000,000 feet annually, will be removed to Thessalon, Ont., so as to be closer to the timber supply. The expense of rafting logs is said to be responsible for this decision.

THE EASTERN PROVINCES.

The lumber business carried on by J. Gauthier, at D'Israeli, Que., has been registered.

Villenneuve, Leonidas & Company, lumber dealers, Montreal, have dissolved partnership.

The Eastman Lumber Company has purchased the mill operated at Eastman, Que., by Mr. L. D. Phelps.

Mr. T. Larose and Mr. Z. Verthiaume, sash and door manufacturers, Montreal, have registered their business under the name of Larose & Verthiaume.

Harvey & Holmes, lumber dealers, Sutton, Que., have dissolved partnership.

Gregoire & Bertrand's lumber business at Plesisville, Que., has been registered.

The E. B. Eddy Company, of Hull, Que., contemplate the erection of an addition to their match factory, and also intend erecting a planing mill in connection with their works.

The St. John River Log Driving Company have taken over all the property of the Fredericton Boom Company, which is in liquidation. The liabilities of the boom company, which amount to about $60,000, will be paid by an issue of bonds.

The Prescott Lumber Company's shingle mill at New Mills, N.B., was totally destroyed by fire on February 23rd. Two shingle machines and a small rotary were in the building at the time, and the loss sustained amounted to $7,000. The company will rebuild at once.

The O'Neil Lumber Company, of St. John, N.B., have sold out to the Bay Shore Lumber Company, in which Mr. F. C. Whitehouse, of Nottingham, and Mr. D. S. Cowels, of New York, are interested. It is understood that the new management will make extensive improvements to the plant.

The Royal Paper Mills Company, of East Angus, Que., recently sold out to the Brompton Pulp & Paper Company. The capital of the purchasing company will be increased in order to properly handle the increased business. The purchase price is reported to have been about a million and a quarter.

The St. George Pulp & Paper Company, St. George, N.B., are about to commence the erection of their new sawmill, which will have an annual capacity of 3,000,000 feet. The new building will be 40 x 147 feet, and will be built of steel and concrete. The machinery, which will be of the most modern type, will be operated by electric power.

The annual meeting of Rhodes, Curry & Company, Amherst, N.S., took place on February 26th. The business of the year was shown to have been about $2,300,000. In addition to their wood-working and car-manufacturing plant, the company have sawmills at Little Forks and Westchester, and are also operating a mill in Queen's county, cutting oak and pine for car-building. Officers of the company were re-elected as follows:—President, N. Curry; vice-president, N. A. Rhodes; secretary-treasurer, J. M. Curry.

Mr. C. M. Sherwood has just completed the erection of a sawmill at Centreville, Carleton county, N.B. The mill is 123 x 47 feet, covered with metal from sills to peak. The boiler and engine room is 24 x 60 feet, and contains a 175 horse-power engine and boiler. The mill equipment is the best, including a rotary saw, gang edger, planer, matcher, lath machine and shingle machine. Mr. Sherwood has about 2,000,000 feet of logs at the mill, consisting of birch, maple, fir, spruce, hemlock and cedar. It is his intention to have his lumber carefully manufactured, so that it will be acceptable in any market.

MANITOBA, SASKATCHWAN AND ALBERTA.

The lumber business of Fugle & Davies, carried on at Lloydminster, Sask., is to be wound up.

Mr. J. L. Williamson, lumber dealer, of Manor, Sask., has been succeeded by McLachlin & Ellis.

Montjoy & Glover, who carried on a lumber business at Heward, Sask., have been succeeded by Montjoy Bros.

Mr. Jas. McKenzie, of Crystal City, Man., has sold his lumber business to the Robertson-Adams Lumber Company.

March Bros. & Wells, lumber dealers, Langenburg, Sask., have disposed of their business to Kalass Whitehead & Olson.

J. E. Brooks & Company, lumber dealers, High River, Alta., have sold out to the Enterprise Lumber Company, of Lethbridge.

Blain & McDonald, of Saskatoon, Sask., have purchased Hogue & Thomson's planing mill. The price is said to have been $22,000.

The Imperial Elevator & Lumber Company have purchased the lumber business heretofore carried on by Mr. S. T. Odegard at Caron, Sask.

The Medicine Hat Lumber & Manufacturing Company, Limited, Medicine Hat, have recently purchased property adjoining their present factory, with the intention of erecting an extension thereon.

A new retail lumber company has been formed in Winnipeg, to be known as the Workman-Livingstone Lumber Company, with offices at 720 McIntyre Block and 289 Simcoe street. It is understood that the yards of this company will be put on Wall street.

The Prince Albert Lumber Company are building a new boiler house for their planing mill, which has recently been enlarged to double its former capacity. This, together with other additions that have been made of late, make this mill one of the largest in Western Canada.

J. W. Woods, D. N. Finnie, E. Linton, G. C. Murray, all of Ottawa, Ont., and R. McLellan, of Winnipeg, were recently incorporated by the Dominion Government under the name of Woods Western, Limited, with an authorized capital of $500,000. The company will manufacture lumbermen's supplies, such as tents, tarpaulins, etc., and the head office will be at Winnipeg.

BRITISH COLUMBIA.

Grant Bros., sash and door manufacturers, of Vancouver, have disposed of their business to Scarlett & Grant.

The Cowichan Lumber Company will shortly commence the erection of a large sawmill at the head of Burrard Inlet, to have a capacity of 200,000 feet per day.

It is understood that the Kennedy Pole Company, of Spokane, are about to erect a mill at Meadows, B.C., about thirty miles south of Nelson, on the Great Northern Railway.

The Robertson Lumber Company are rebuilding their mill at Enderby, at a cost of $75,000. The capacity of the plant when the improvements are completed will be nearly $100,000 feet per day.

A new logging camp is being established on Pitt Lake by Mr. A. Jones. The limits in the past have been logged for shingle bolts only, but it is Mr. Jones' intention to get logs out which will be converted into lumber at their sawmill at Eburne.

Messrs. J. W. Davis & Son are building a shingle mill at New Westminster, B.C. It will have a daily capacity of 200,000 feet. Messrs. Davis & Son have been in the shingle business for the past ten years

Saw Mill at Rainy Lake, Ont.
Yards and Planing Mill at Hamilton, Ont.
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at Ferndale, Washington, removing to British Columbia on account of the better timber and shipping facilities.

At the meeting of the Hastings Shingle Manufacturing Company, Limited, held on March 14th, the following officers were elected:—President, Mr. A. C. Flumerfeldt; Vice-President, J. A. McNair; Secretary, Mr. C. H. Farrow; Manager, Mr. H. Davidson. Messrs. A. B. Erskine, J. Ramsay and R. J. Kerr were elected directors.

Work on the planing mill and sash and door factory of the Red Fir Lumber Company at Nanaimo, B.C., has been started. The new building will be 86 feet square and two storeys high, and will be so constructed that it can be enlarged when increased business warrants it. The shingle mill is practically completed, and, at the time of writing, is awaiting the arrival of machinery, which has been held back on account of the freight blockade.

The Vancouver Fire Protection Company, recently organized, have established offices at 541 Hastings street, Vancouver. The object of this new company is to handle the "Cascade" automatic sprinkler head, a new device for the protection of mills, dry kilns, factories, warehouses, etc., against the spreading of incipient fires. Great claims are made for this new system of fire protection, which is said to cover all the essential features of other sprinkler heads, and has many other new features, entirely its own. E. H. Heaps, of Vancouver, is president of this company, Wm. Leek vice-president, and John Heaps secretary-treasurer.

Another shingle mill is about to be erected at New Westminster, being built by Messrs. J. W. Davis & Son, formerly of Ferndale, Wash. A water-front site has been secured, having a frontage of 750 feet on the Fraser River, about half a mile below the station at New Westminster. At the rear of the property a spur railway line will be built, connecting with both the Great Northern and with the C. P. R. tracks. Messrs. Davis expect to put in four shingle machines—the Johnston improved upright—and commence cutting by the middle of the summer. They hope to market their product in Canada.

The Kootenay Shingle Company, of Salmo, B.C., started operations again on March 25, after a shutdown of nearly four months. During that time the plant has been entirely overhauled and additional machinery put in. The mill has now seven shingle machines, five Simplex, one Dunbar, and one hand machine, giving a total daily output of about 200.000 shingles. The power plant has been improved by the erection of a new boiler house and the installation of another large boiler, from the Albion Iron Works, Vancouver. The company has also built a road one and one-half miles long from the mill to the bush, on which they are operating a road engine, hauling the bolts by means of cable, from the bush to the mill.

The Abbotsford Lumber Company, of Abbotsford, B.C., has commenced cutting operations again, and will cut lumber at their old mill site throughout the spring months. The company, however, contemplate moving about the 1st of July from their present location, which has been sold to the Great Northern Railway Company, to Abbotsford Lake, about one mile distant, and they are at present grading the spur railway line, which will connect their new mill with the C. P. R. at a point just north of the station. This line will be extended some two or three miles beyond the mill site on to their timber limits, and will thus supply the mill with logs as well as handle their manufactured lumber. The new mill of the Abbotsford Lumber Company will be thoroughly up-to-date in every particular, and will have a capacity of betwenty fifty and sixty thousand feet of lumber per day.

The False Creek Lumber Company, Limited, is the name of a new concern that was organized in Vancouver, B.C., last fall, and has commenced building operations. The company's mill is located on the south shore of False Creek, in the City of Vancouver. The building, at the time of writing, is in course of erection, and is nearly completed. The machinery has all been purchased from the local firm of Ross & Howard, and consists of a circular saw, line rolls, steam feed, etc. The principal product of the plant will be fir lumber. It is expected to be in operation some time in April, and when completed will have a capacity of about 50,000 feet per day. The work for the sawmill will be cutting lumber for the planing mill, which will be erected nearby. The personnel of the False Creek Lumber Company, Limited, consists of Mr. J. Menzies, president; D. McLeod, vice-president, and Mr. C. H. Carnwath, secretary-treasurer and general manager. All these gentlemen have until recently been connected with the Vancouver Lumber Company, Limited.

PUBLICATIONS.

The Ontario Department of Agriculture has issued for general distribution a bulletin on farm forestry, by E. J. Zavitz, B.A., lecturer on forestry.

The Dodge Manufacturing Company, of Toronto, pride themselves in having the most complete plant in the Dominion exclusively devoted to the manufacture of power transmission machinery and sundry specialties. Their latest booklet describes the Dodge "Standard" wood split pulley with interchangeable bushing system.

The Columbia Engineering Works, Portland, Oregon, have, since September, 1906, specialized on the manufacture of steel castings and steel logging blocks and tools, and have accordingly changed their name to the Columbia Steel Company. A bulletin recently issued by them describes their Skookum cast steel logging blocks.

Allis-Chalmers-Bullock, Limited, Montreal, have recently issued Bulletin No. 200, relating to Lidgerwood hoisting engines for general contracting purposes. Allis-Chalmers-Bullock are the sole licensees for Canada of the Lidgerwood Manufacturing Company, New York, whose engines are the standard of the world for their different uses.

Mr. A. R. H. Baughman, of Indianapolis, Ind., has just issued a "Junior" pocket edition of Baughman's "Buyer and Seller" for the tally man, inspector and yard foreman. The book is of vest-pocket size, but contains 190 pages of very useful tables. It is published in two bindings, flexible leather at $1 per copy and full flexible leather at $1.25.

The first number of the Canadian Mining Journal has made its appearance. With it has been incorporated the Canadian Mining Review, which for 23 years has been the leading mining journal of Canada. The Journal is a very creditable production, attractive in appearance, and with a liberal advertising patronage. Mr. J. J. Harpell, B.A., is the business manager, while Mr. J. C. Murray, B.A., is editor in chief, and Mr. H. Mortimer-Lamb associate editor. The publication office is in the Confederation Life Building, Toronto.

TRADE NOTES.

The Schaake Machine Works, of New Westminster, B.C., have the contract for the supply of eight of their iron frame upright shingle machines—the Johnston—to the E. H. Heap Lumber Company. Four of these will be installed at the new Vancouver mill, and four at the Ruskin mill.

An agreement has been made between the Lombard Log Hauler Company, of Waterville, Maine, and the Phœnix Manufacturing Company, of Eau Claire, Wis., by which the latter company secures the right to make and sell the Lumbard log hauler, paying Mr. Lombard $12,000 each year for eleven years as royalty.

The Schaake Machine Works Company, of New Westminster, B.C., have received the contract for the supply and installation of all the pulleys, gears, line shafting and general running equipment for the Lamb-Watson Lumber Company's improvements and additions to their mills at both Kamloops and Arrowhead, B.C. The mill company is installing a new Corliss engine and another band mill in each of their mills.

The A. J. Burton Saw Company, Limited, Vancouver, report that the month of March has eclipsed all previous months in the amount of business that has come in to them. Amongst other orders they have is that for the supply of the entire band saw outfit for the new mill of the Columbia River Lumber Company at Golden, B.C., including both double and single cuts, also circular saws; and the order of the A. R. Rogers Lumber Company, at Enderby, B.C., which includes twelve double-cut band saws, band resaws, circular saws, and the saws for the edgers and slashers. Last fall the Burton Company gave their circular saw department a thorough overhauling and installed several new machines, including a large automatic circular saw grinder. They have just completed the addition of a new wing to their building, which will be used for office and warehouse purposes, and are planning for a further extension of their premises in the immediate future.

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NOTES OF THE RECENT WINNIPEG RETAILERS' CONVENTION.

Mr. C. F. Taylor, superintendent of the Rogers Lumber Company's retail yards, was a visitor to the convention. His residence is at Kenmore, N. D., just over the border.

A. H. Foulds, Carnduff, Sask., reports the outlook as being very bright.

Jas. A. Badgley, Emerson, Man., reports his town as progressing favorably.

J. J. Heslip, of the Crown Lumber Company, Hamiota, Sask., commented favorably upon the energy displayed and healthy appearance of THE CANADA LUMBERMAN.

A noticeable feature of the convention was the large number of Hoo-Hoo buttons.

Mr John Taylor, of the Thos. Taylor lumber firm of Boissevain, Man., reported fair business for the winter. Last fall they had quite a rush, a large number putting up improved buildings. Mr. Taylor says: "As the new line of the Great Northern goes through Boissevain, it will likely stimulate trade. We would order car after car a week apart only, and have them delayed a month or more, and then get in three or four to unload at once or demurrage." Mr. Taylor says THE CANADA LUMBERMAN is the finest trade journal that he knows of.

Mr. T. Millard, of Millard Bros., Cypress River and Holland, Man., remarked that the conditions of the retail trade in the country are not the same as in the city, as the country dealers suffer through the frequent raising of prices. He said: "We depend on the farmer, and he expects the same price this year as last year, and will get good and mad if we ask him an advanced price. He also thinks that because he has been dealing for years with us, it is a mean thing to raise on him when he has been such a good customer for years. In the city the trade is considerably of a catch-as-catch-can trade, and if a customer is lost another takes his place." Mr. Millard thinks that the loggers are to blame for the high prices, as if there is a combine it exists right with the loggers Their company buy more from the East than from the West, on account of the high prices.

Mr. John A. Telfer, who was conducting the business for the Beaver Lumber Company at Gainsboro, Sask., has assumed charge of that company's branch at Portage la Prairie. He expects good business when spring opens up.

Mr. Bannerman said he hoped to see the lumbermen get on some social feature at their next convention.

Mr. J. A. Montjoy, retail dealer, Heward, Sask., reports a good business during the past year, but collections were slow and a large number are coming in asking for long credits.

MR. E. S. SINGER—Hoo-Hoo Number 4444.

The country is not poor, but the grain has not been marketed, and as a consequence money is tight.

A PIONEER HOO-HOO.

To the gentleman whose features are herewith portrayed belongs the credit of being one of the first Canadians to join the Hoo-Hoo. Edward S. Singer's number is 4444, his initiation taking place in St. Louis in 1895. Our records show that he was the sixth Canadian to become a devotee of the Sacred Black Cat.

Mr. Singer is a resident of Guelph, Ont., his business being that of a wholesale lumber dealer. His specialties are yellow pine and oak timber and white pine and British Columbia shingles.

THE HASTINGS SHINGLE NANUFACTURING COMPANY.

The annual meeting of the shareholders of the Hastings Shingle Manufacturing Company, Limited, of Vancouver, was held at the head office on March 13. The directors' and manager's report showed a very satisfactory state of affairs, considering the difficulties of transportation which they, like all other milling companies, have had to contend with. The company is in a satisfactory financial condition, and the balance sheet showed a gradual gain, though the profits accruing were hardly in keeping with the capital invested.

The expenditure in connection with the increasing of the capacity of mill No. 2, and the rebuilding of mill No. 1, was approved. When the latter mill is again in operation the company's output will be considerably greater than heretofore.

The following officers for the ensuing year were elected:—President, A. C. Flumerfelt; vice-president, J. A. McNair; secretary, C. H. Farrow. These, with the following, compose the directorate:—A. B. Erskine, R. J. Ker, Jas. Ramsay. This board is practically the same as last year. Mr. H. Davidson continues as manager of the concern.

A snow-slide occurred at the logging camp operated by the Britannia Copper Syndicate Mines, on Howe Sound, B.C., which resulted in the death of four of the workmen.

The ratepayers of the Town of Thessalon recently carried a by-law granting a bonus of $10,500 and tax exemption to the Saginaw Lumber & Salt Company, who will establish a large sawmill in the town.

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For Sidings, Roofings, Ceilings, Etc.
Absolutely free from defects—made from very finest sheets.
Each sheet is accurately squared, and the corrugations pressed one at a time—not rolled—giving an exact fit without waste.
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WHOLESALE MANFRS. LIMITED
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Louisiana Red Cypress
Is the Best Wood

for interior and exterior finish in-the-construction-of-all kinds of buildings.

It has a beautiful grain and when stained or finished in its natural color presents an elegant appearance.

It will take paint better and last longer than any other wood.

MacKenzie, Goldstein & Biggs, the well known Architects of New Orleans, say:

"Our experience with Cypress has been such that we invariably persuade our clients not to use hardwood in trimming up the interior of their houses, but to use Cypress.

"To the uninitiated and those that have never seen a house trimmed up in Cypress and treated with stains and properly finished this may sound as if we were "Old Fogies" in our ideas, and not strictly up to date; however, notwithstanding the criticisms that were originally made in regard to our specifications calling for Cypress as above, we have come out on top with flying colors, for the simple reason that there is in our estimation absolutely no woods that have as pretty a grain and that show up to better advantage than Cypress if properly handled on the interior.

"Now so far as exterior work goes we appreciate the conditions that you have to contend with in other sections where Cypress is not native, and we can say only this much, that if you once properly introduce Cypress of any kind for purposes of special value, it will talk for itself and every customer that is shown it will be a walking advertisement.

"In our estimation Cypress is the best wood for places where moisture is, and it absolutely will not rot. It is also good for exterior work for the same reason. There is no wood that will take paint better, and we have proven conscientiously for our own satisfaction that it is a ***better*** wood than ***Poplar*** or ***White Pine*** for ***white or enamel finishes.***

"As far as greenhouses and tanks are concerned, it is absolutely without a peer; in fact it is the best kind of wood to use for buildings for the above purposes."

WRITE US

Louisiana Red Cypress Company

CAPITAL $1,000,000.

FRANKLIN GREENWOOD, General Manager.

HIBERNIA BANK BUILDING NEW ORLEANS, U. S. A.

THE EYE VS. THE EAR.

Scientists recognize that most people remember more of what they see than of what they hear.

Talk to a man an hour when he's busy, and what's the result? You've taken up his time, and your own; you've tried his patience and probably made him sore on you—and what is worse, on what you represent. Fully three-quarters of what he has heard is soon forgotten.

Has it ever occurred to you that there is a better way—a more effective way? Approach him when he is in repose, when his thinking faculties are clear, when his mind is restful and retentive.

That's the time to present your argument—show it to him in black and white—present it through the medium of his eyes, rather than through his ears and it is not forgotten. A clear, convincing argument, with facts briefly, but fully and truthfully stated, is certain to bring enquiries. Judicious advertising does pay.

NEW SUPERINTENDENT.

Mr. Bergeron, formerly of Kalespiel, Montana, has arrived at Enderby, B. C., to take over the superintendency of the A. R. Rogers Lumber Company's mill at that place.

WESTERN LUMBERMAN MAIRRED.

The marriage of Mr. W. H. McCormick and Miss Ella Wright took place at the Presbyterian Church, Enderby, B C., March 20th. Mr. McCormick is a son of Mr. Geo. McCormick, general manager of the Canadian Pacific Lumber Company at Port Moody, B.C., and is the local manager of the Lamb Watson Company, Limited, of Kamloops, B. C.

Mr. George Cormack, junior, of Whitby, Ont., left a couple of weeks ago for Vancouver, B.C., with the object of engaging in the lumber business in British Columbia.

The Elk Lumber Company have installed five new 18-foot by 72-inch boilers that will supply 1000 H P. at their new mill at Fernie, B C. These will be used to operate the sawmill. A large new planer will be set up in the planing mill which will have double the capacity of the old machine, the old battery of the boiler being used to supply power to drive the new planer.

The Baker Lumber Company have completed their large mill at Waldo, B.C., and are now erecting the planing mill. The saw mill, which will have a capacity of about 70,000 feet per day, is equipped with a double-cutting band saw and a re-saw. It has already been in operation for the purpose of cutting lumber for the company's own works, and gave entire satisfaction. The mill was built by Mr. Charles Kendall, one of the most expert mill builders in the province.

The Fernie Lumber Company of Fernie, B. C., are making extensive improvements at their new mill, necessitating an outlay of about $15,000.00. The changes will involve the remodelling of the interior of the mill and the installation of some new machinery, consisting of a new steel carriage, a log haul, a new kicker and a new grinder for the planer, also an extension of the conveyer system. The power will also be increased fifty per cent. by the installation of an additional boiler, which will be placed in the new boiler house that has been erected. Electric lights have also been installed.

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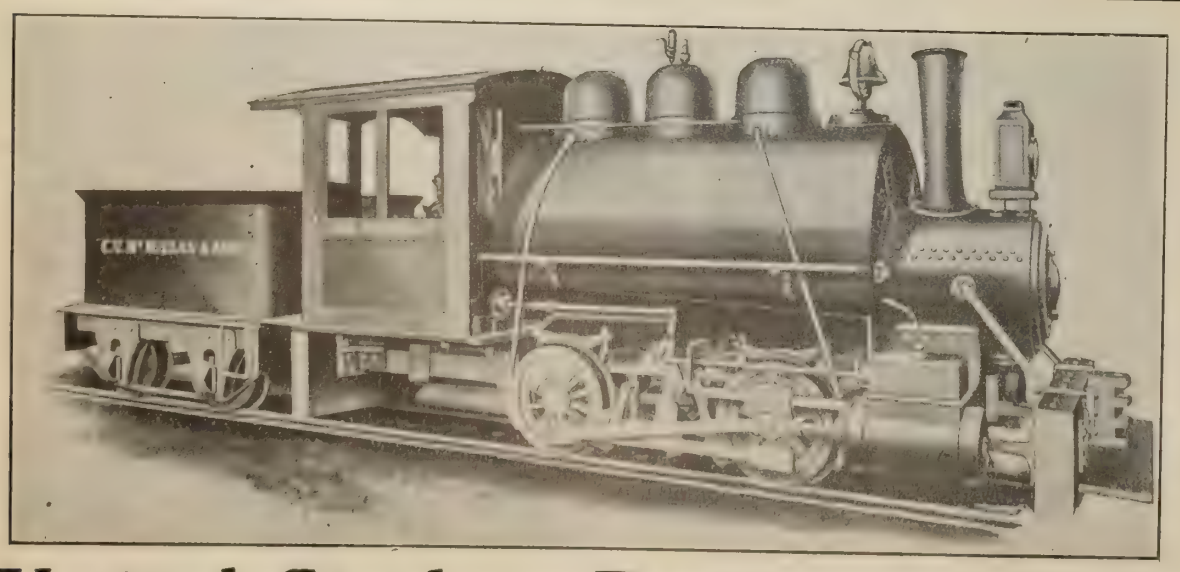

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SEND US YOUR ENQUIRIES

NORTHWEST REPRESENTATIVES:
SEATTLE, WASH. - PORTLAND, ORE.

NEW SAW CATALOGUE.

The Simonds Canada Saw Company and the Simonds Manufacturing Company have just issued a 1907 edition, handsomely illustrated, catalogue of their entire line, the products of four large factories, of which two are located in Fitchburg, Mass., and one each in Chicago and Montreal, full-page engravings of which are shown. There have been many additions to the comprehensive lines of saws for all purposes, both hand and power, machine knives, files, hack saws, etc. Some of the newer goods are as follows:—Page 68, light weight hand saw clamp, for carpenter's kit; pages 70-71, circular hand saw setting tools, and carpenter's saw set; page 74, band saw filing vise; page 76, setting machine for band saws; page 77, power setting machine, and page 129, circular knives for cutting paper, cork, cloth and leather. There have also been increases in the lines of cross-cut and circular metal cutting saws, carpenter's hand hack saws, having an adjustable handle for different conditions of work. The book, of 138 pages, illustrates and describes the inserted point and solid tooth circular saws, band saws, cross-cut saws, hand saws and mill saws, files, hack saws and various other goods related to the line. In addition to the four factories, they have branch offices carrying stock at New York City, New Orleans, San Francisco, Portland, Ore., Seattle, Wash., Toronto, Ont., and St. John, N.B.

You Can Save Money Turning Balusters

Besides Making More of Them and Much Better Ones

If You Will Use

Our No. 2 Baluster Machine

Turns Balusters, Spindles, Table Legs, any pattern, hard or soft wood, 1,000 pieces daily. Does perfect work at less cost than by hand. Stock is held in chucks, instead of between centres, avoiding all vibration. If you make balusters you should investigate carefully.

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The Twin Screws are arranged with flexible joint to raise up in crossing portage

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Saw Mills and Planing Mills located on C. P. R and Ottawa River 70 miles west of Montreal

MARKET FOR EXTRACT OF TANBARK.

Mr. J. S. Larke, Canadian Commercial Agent for Australasia, writes to the Department of Trade and Commerce, Ottawa, as follows:—

"I observe that an expert from the east who has visited British Columbia, states that the hemlock bark of that province is 20 per cent. richer in tanning than the bark of eastern Canada. Nevertheless it is either burned in the woods or allowed to go to waste. I have more than once called attention to Australia as a market for bark extract and still believe that it would secure a ready sale here. I saw one or two lumber firms when in Canada and called their attention to this matter, and I was given to understand that it was probable that during the present year bark extract would be made. I have not heard of anything since in regard to it."

WELL WORTH FILING.

The following words of appreciation are from Mr. T. A. Burrows, M.P., Grandview, Manitoba: "Just a line or two to congratulate you on the production of the fine "Trade Number" of THE CANADA LUMBERMAN just to hand. It is certainly a number well worth filing for future reference."

Messrs. Curry & Thrasher, Deux Rivieres, Ont., have sold their sawmill and limits to Messrs. Booth & Ostrom, of Pembroke.

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1 Tubular Boiler 40" x 10 ft.
1 No. 5 jewel engine (high speed), (new).
1 45 horse power engine (slide valve).
1 60 horse power engine (slide valve).
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1 Smoke Stack 18" x 40".
1 Horizontal Shingle and Heading Machine. Broom handle and Block lathes built to order.

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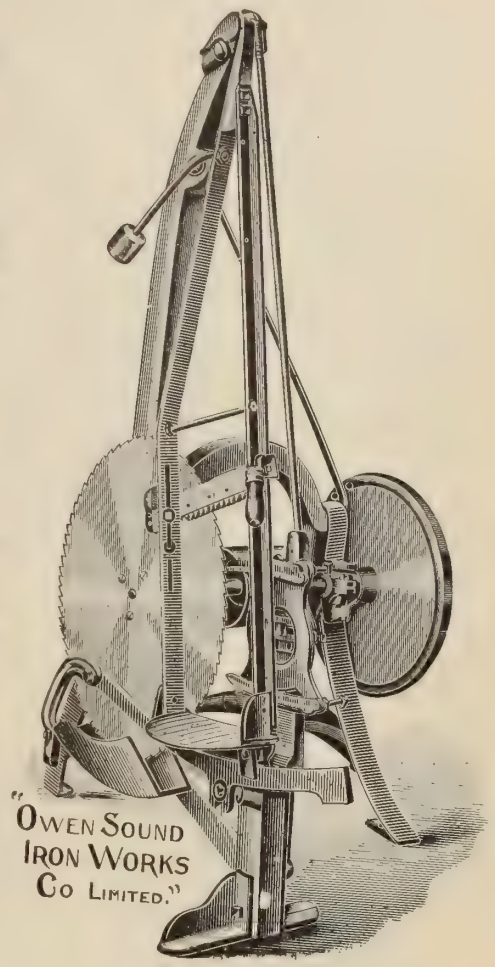
This machine is also specially adapted for cutting headings, and adjustments can be quickly made. This is the cheapest priced and best machine on the market. It is also the cheapest because it will cut more and better shingles out of your refuse than any other machine.

Can you afford to burn your refuse at the present price of lumber? It means money to you. Save it.



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Manufacturers of all kinds of Saw Mill Machinery
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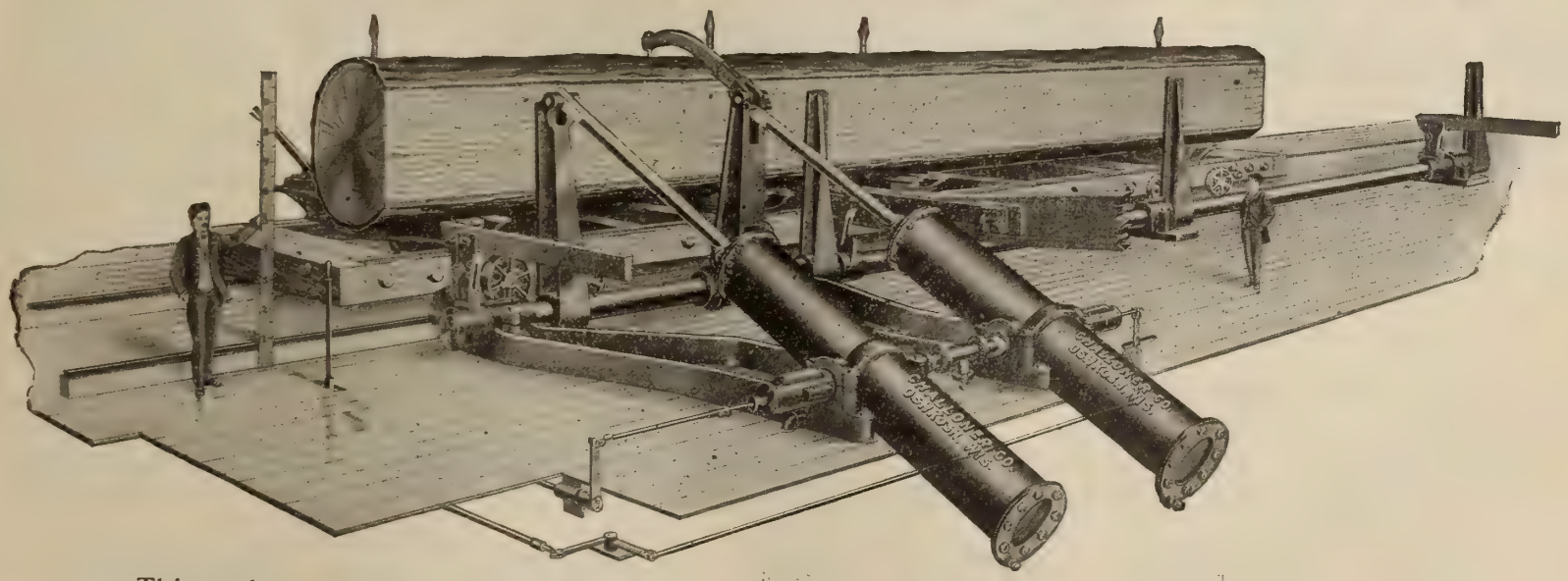

This is the only Log Turner that uses no tooth bar and turns the log away from the carriage.
The log is turned on the log deck, thus relieving the carriage of all strain and jar.
Will handle small logs as quickly as any "nigger" and logs scaling 500 feet and over much quicker. Will handle larger logs than is possible with a "nigger."
Don't buy a Log Turner of any kind till you investigate the Simonson.

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Large Centrifugal Pump and Pulsometer, in first-class condition, complete with foot-valve and hose; no reasonable offer refused.

Screw Cutting Lathe, 10 ft. bed 16" swing, very little used; in fine condition, a chance to secure good modern Lathe at a bargain.

Also large Drill and Slotter, 24" Swing, in first-class condition

Self-oiling Peerless Engine, 75 h.p., also smaller sizes of different makes, Boilers, all sizes, tested and guaranteed.

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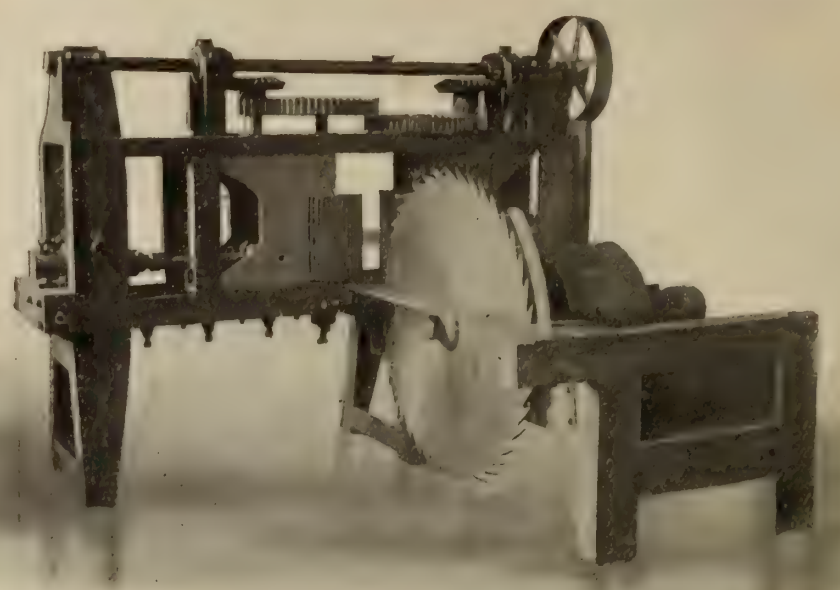

As can be seen by the engraving, the frame is cast in one piece. The legs of cast iron are cast in one piece with the saw bench. This makes an extremely substantial machine.

The feed rolls 12" diameter are driven by cut gears 16" in diameter. The proportions of the gears are such as to give a powerful driving mechanism.

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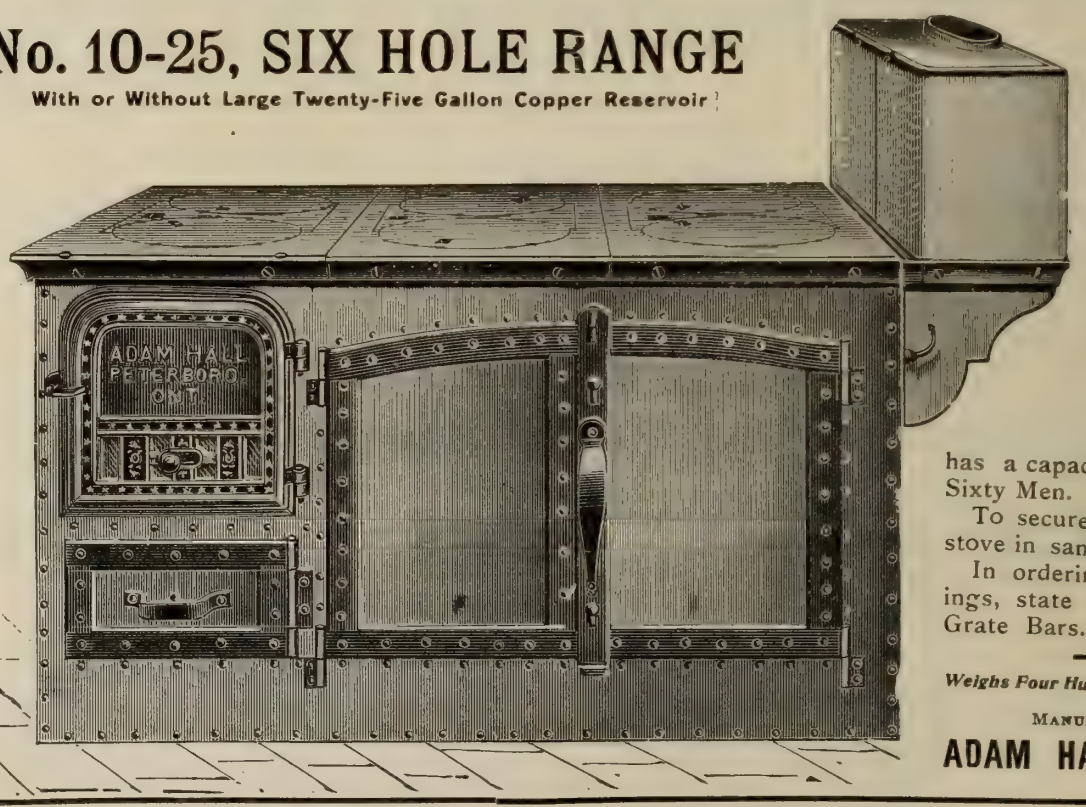

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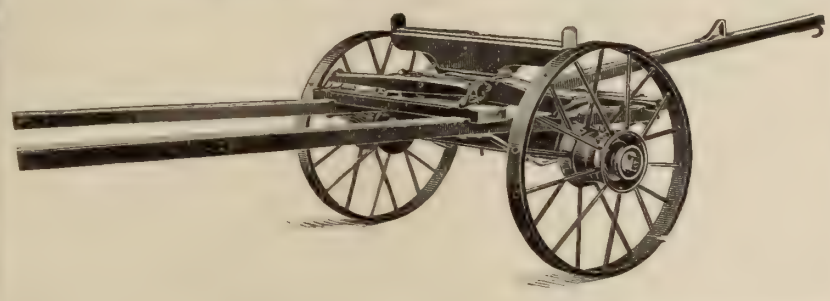

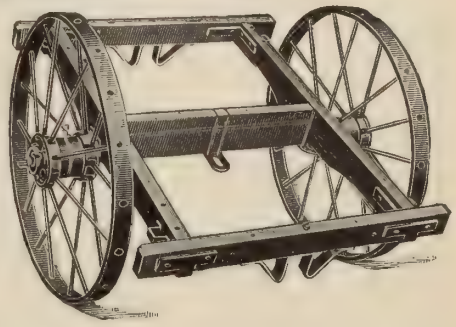

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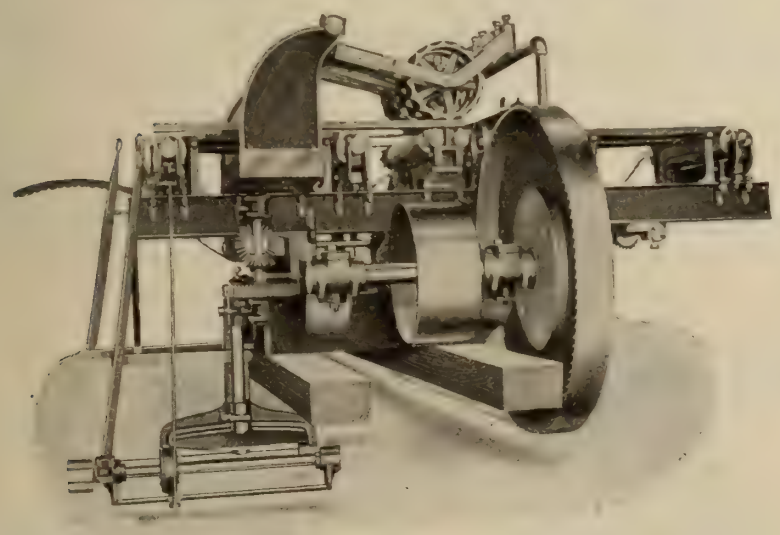

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We are now manufacturing at our Winnipeg Mill:

"Empire" Cement Hard Wall Plaster
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Plaster of Paris, etc.

Quality Guaranteed
Orders Filled Promptly
Get our Prices, which cannot be Beaten.

The MANITOBA GYPSUM CO., Limited
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LAURIE ENGINE AND MACHINE CO., Limited

HAVE YOU SEEN

OUR CELEBRATED

RIVAL MEDIUM SPEED ENGINES

Manufactured Especially for

Saw Mills, Butter and Cheese Factories, Etc.

Write for Catalogue.

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FOR SALE

1—250 H. P. Slide Valve Engine, 18 in. x 36 in. Cylinder, with new Nordinburg cut-off Governor; one rope pulley 8 ft. diameter, grooved for 18—1 in. ropes, the driven pulley is 40 in. dia., fly wheel 12 ft. dia.; also one Tubular Hot Water Heater.
1—Large Double Edger with 6 saws.
1—Saw Edger.
1—2-Saw Trimmer.
1—Saw Trimmer.
1—Twin Circular Saw Rig, with six Saws, Prescott Gun-Shot Steam Feed, cylinder 7 in. dia. 38 ft. 6 in. long, Carriage and Set Works complete.
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Shafting from 2 in. to 8 in. dia. with boxes and couplings.
Pulleys from 6 in. to 9 ft. dia.
Mitre and Bevel Gearing, wood and iron.
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7—54 in. x 13 ft. 6 in. Boilers, 46 4 in. Tubes, full fronts, Grates, Fire Brick Lined Furnaces, Smoke Boxes, Blow-Off, Globe and Safety Valves, Steam and Glass Water Gauges, and Try Cocks complete.
4—36 in. x 11 ft. Boilers, 22 3-in. tubes, fronts and smoke boxes.
3—36 in. x 15 ft. Dutch Oven Boilers, 38 3-in. tubes, half fronts, smoke boxes and boiler plate breechings, part fittings.
1—8 ft. Band Saw Mill, made by Phoenix Mfg. Co., Eau Claire, Wis. Complete and in fine condition.
1—Twin Circular, with Carriage, Head Block, and Prescott Gunshot Steam Feed. Made by William Hamilton Co.
1—3 Head Block Saw Carriage, with double acting ratchet Set Works, Power Receding Gear, Boss and Hammer Dogs, 51 ft. each of V and Flat Tracks, all complete. Made by Wm. Hamilton Mfg. Co., Peterboro, Ont.
1—Gang Saw Mill, Gate 42 in. wide, 50 in. deep, 18 in. stroke, Crank Shaft 9 in. dia., 10½ ft. long; Drive Pulley 48 x 24 in., Flywheel 78 in. x 8 in. Live and Idle Iron Rolls, etc., etc., all complete and good as new. Made by Stearns Mfg. Co., of Erie, Pa.
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1—Sorting Table, with Chains, etc., 100 feet long.
2—Log Jacks each 100 feet long with 200 ft. forged chain, Sprocket Wheels and Friction Driving Gear complete.
1—40 in. McEachren Hot Air Fan.
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10—Hydrants with about 2000 ft. of pipe from 3 in. to 10 in. dia. and two Hose Carts.
60—Lumber Roller Cars.
A lot of Electric Lamps and Fixtures.
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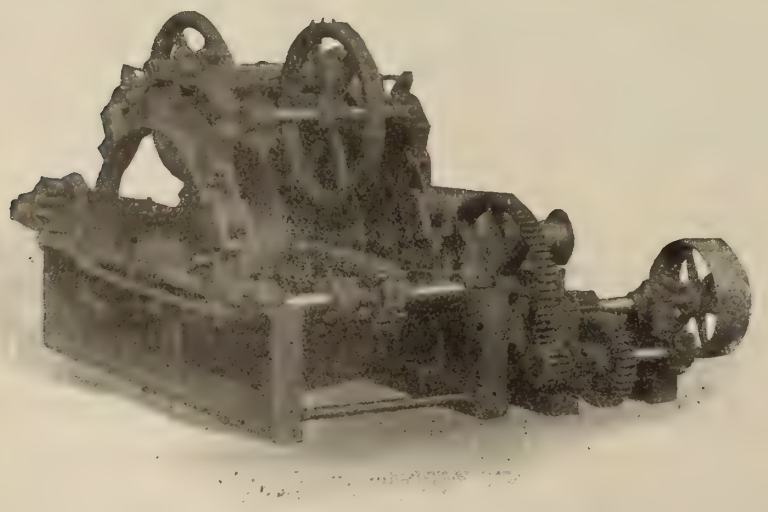

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Slabs both sides of the log accurately and rapidly at one operation. Both saws movable to or from the centre simultaneously by means of a lever within the sawyer's easy reach, and the spacing indicated on a quadrant in plain sight. Will handle logs from 4½ to 20 inches in diameter and from 30 inches in length up. This machine will cut

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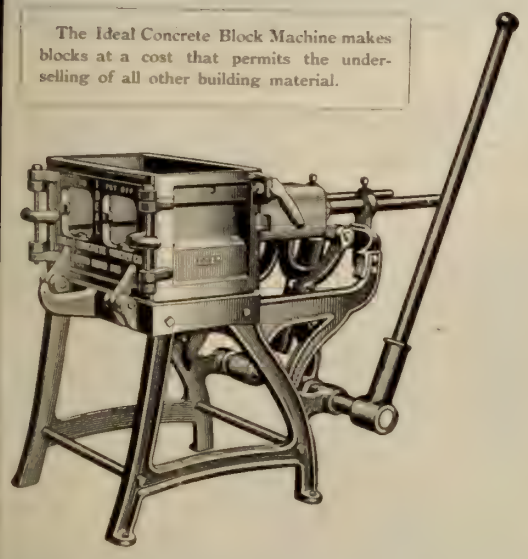

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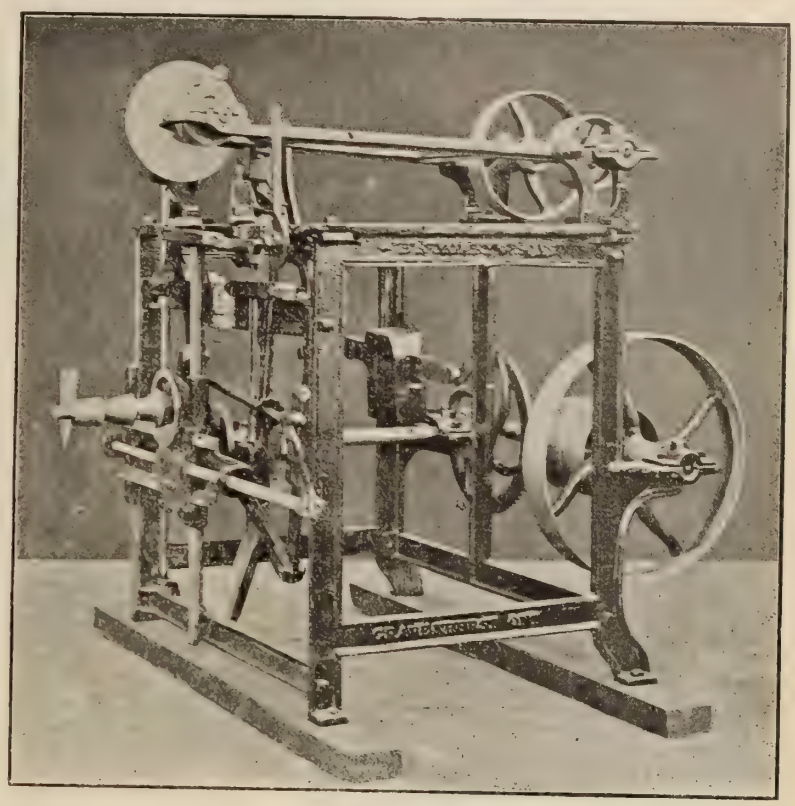

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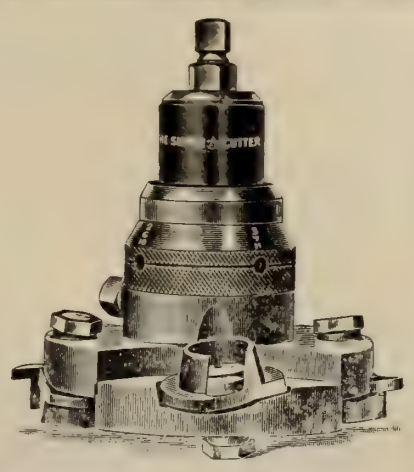

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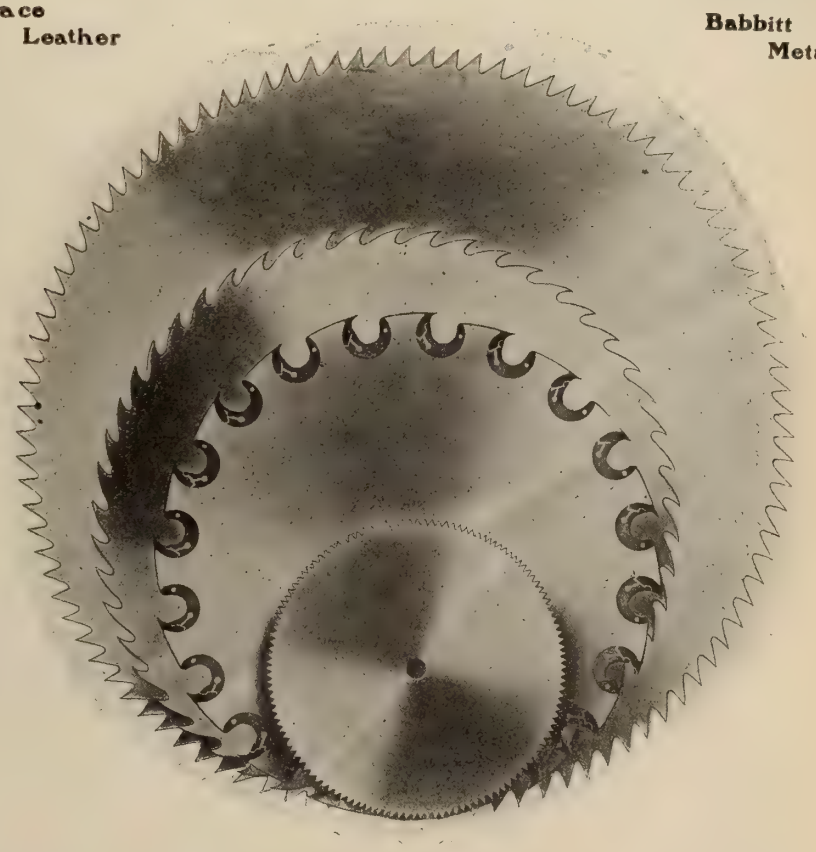

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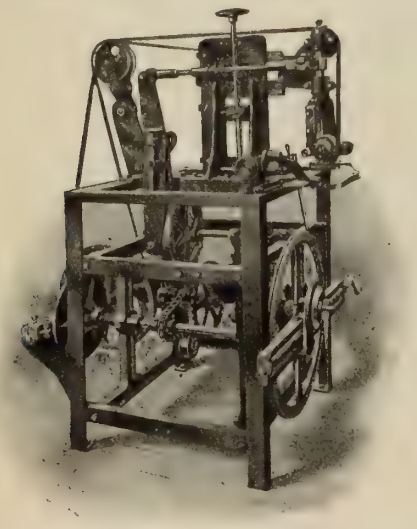

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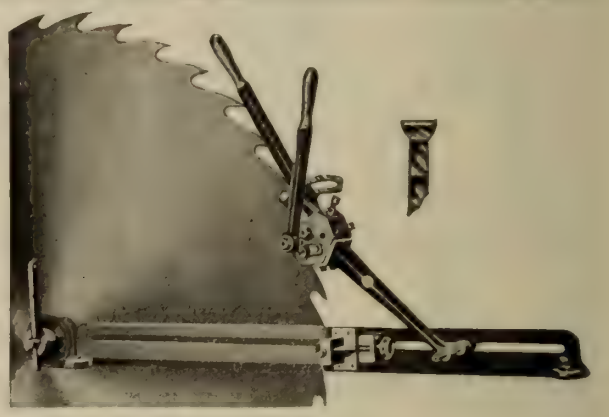

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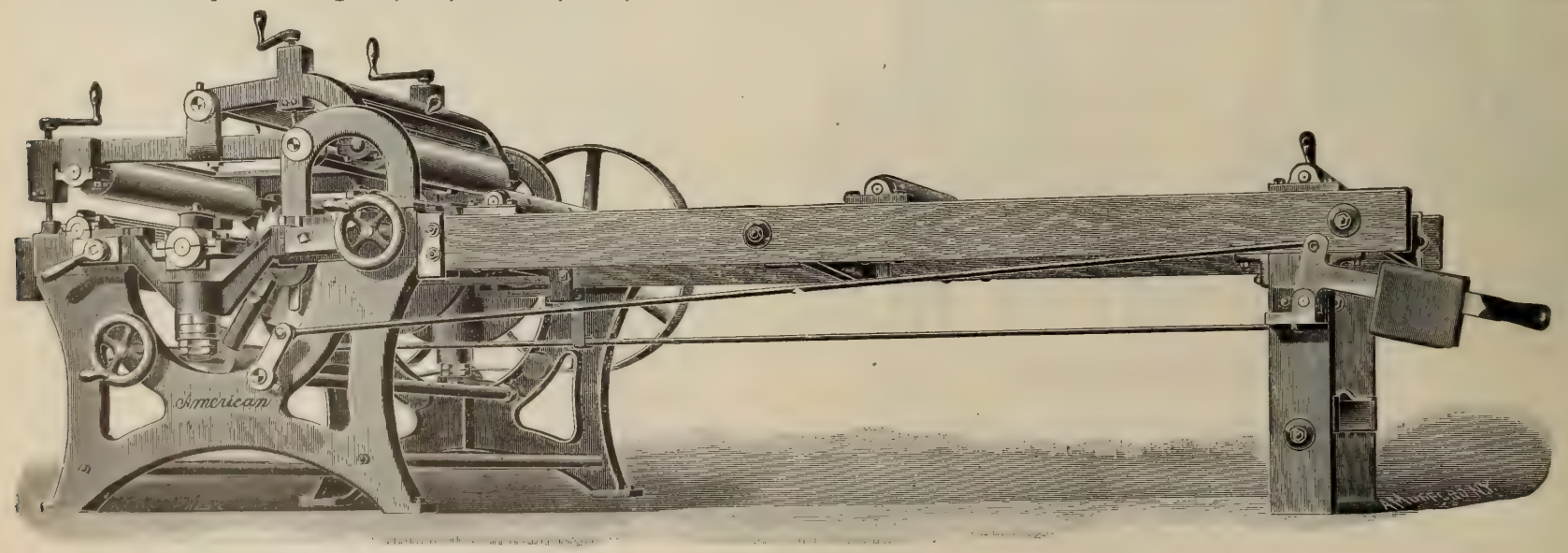

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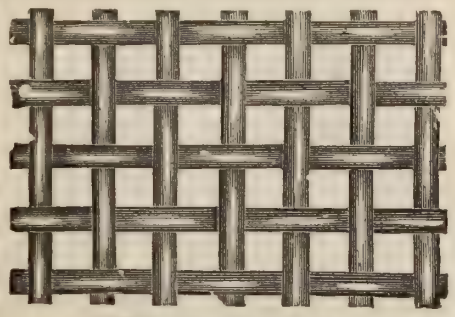

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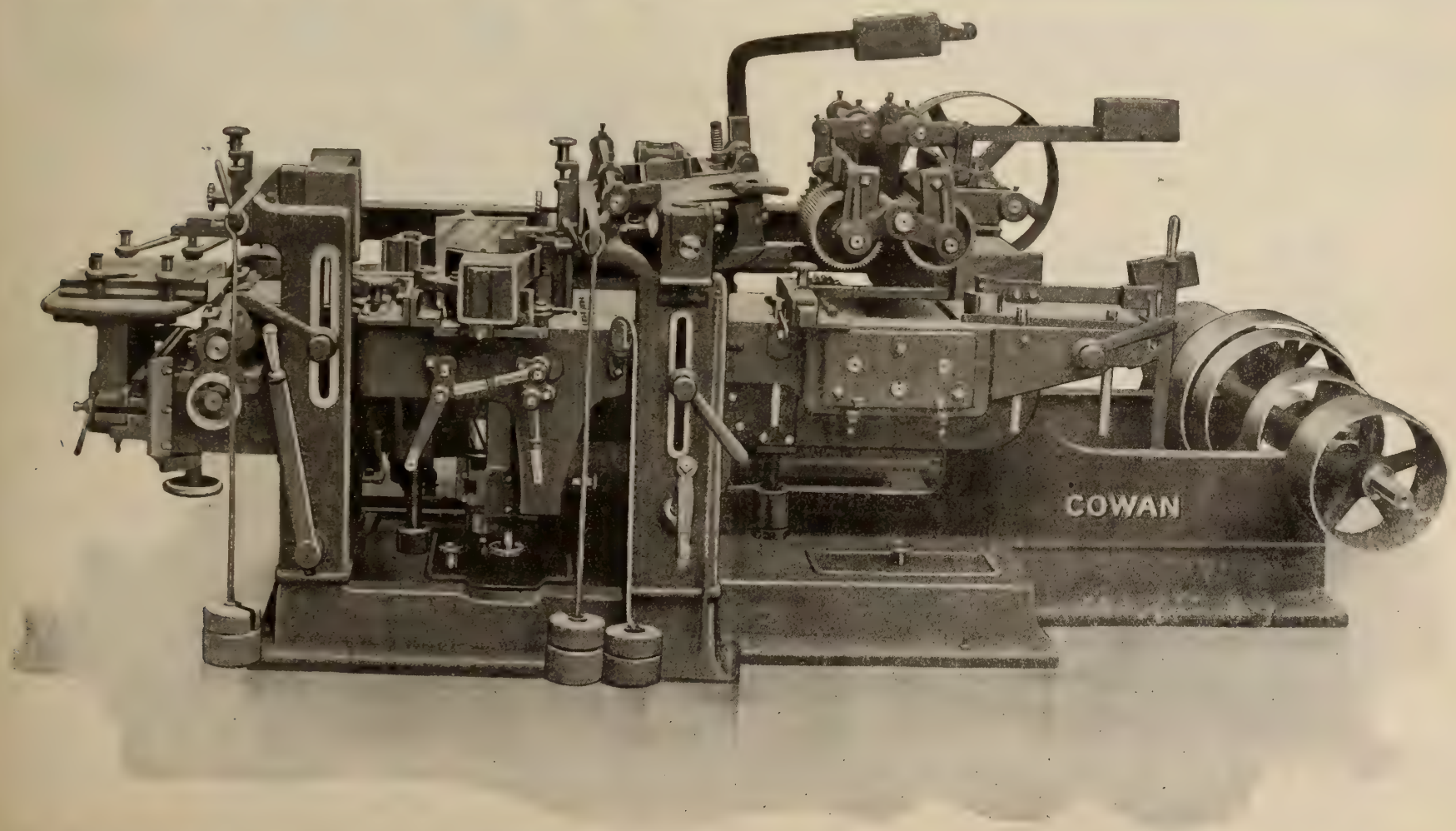

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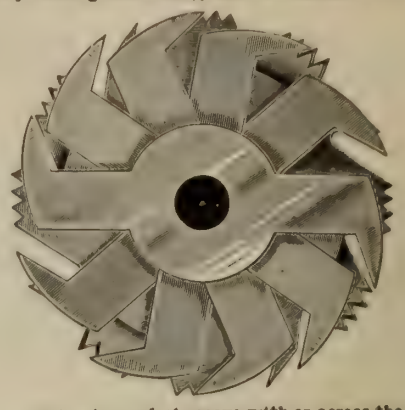

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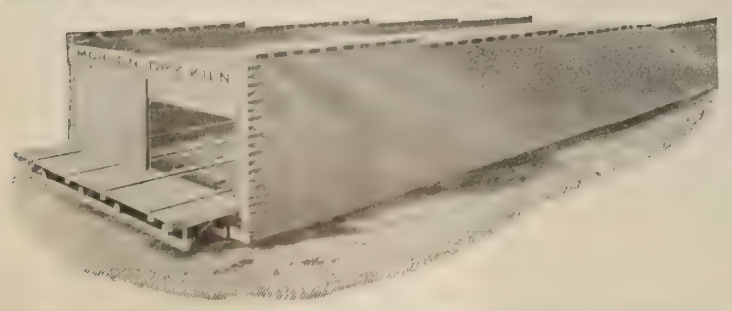

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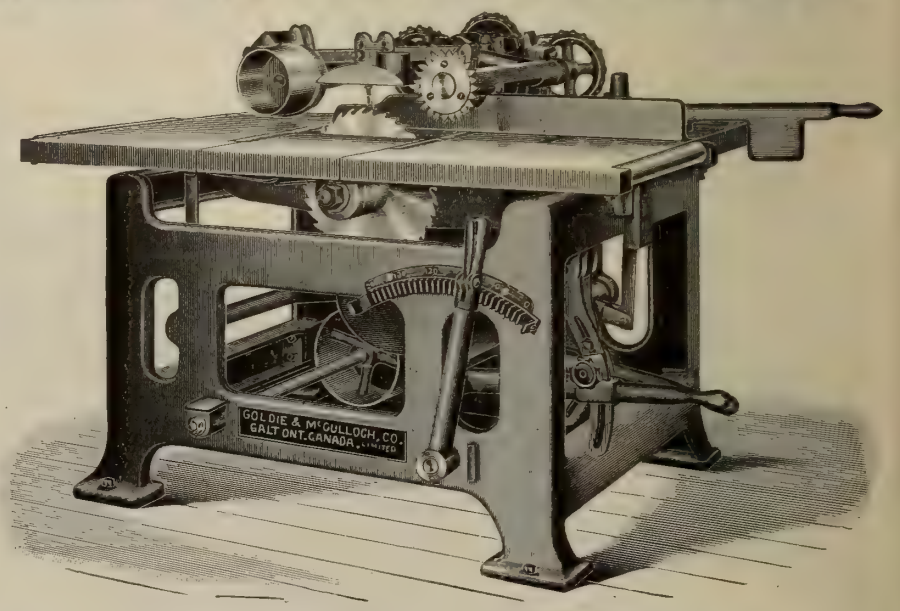

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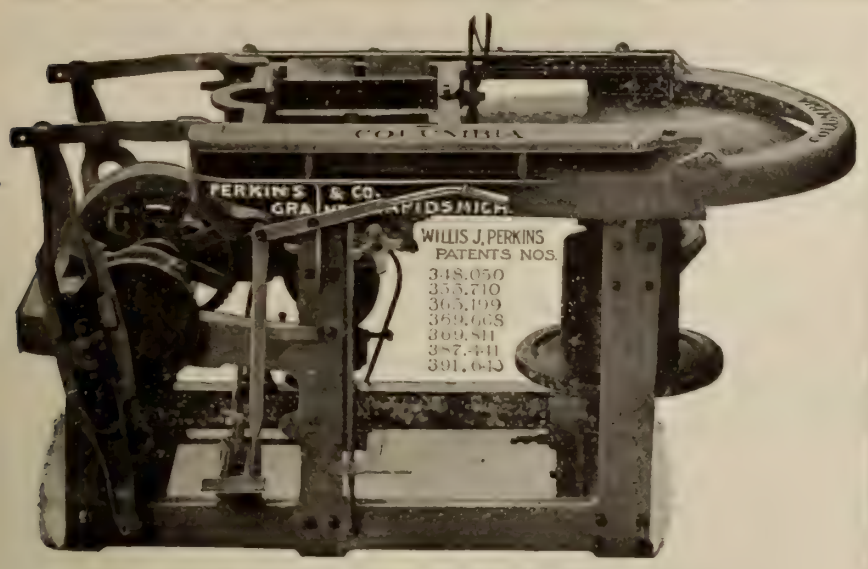

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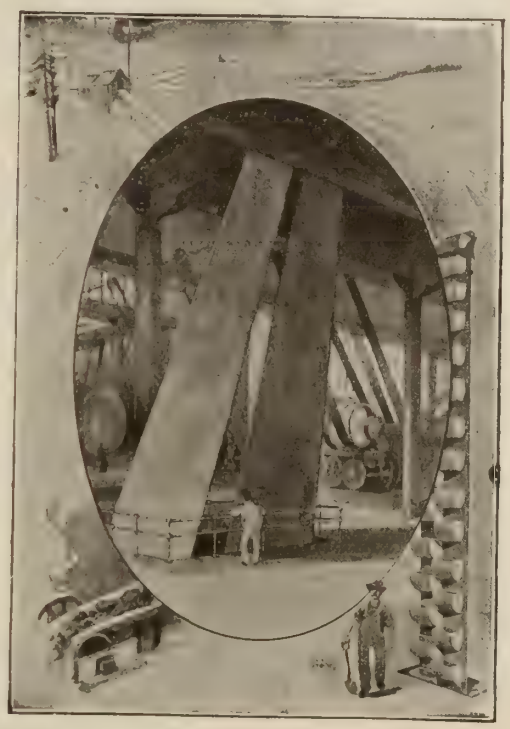

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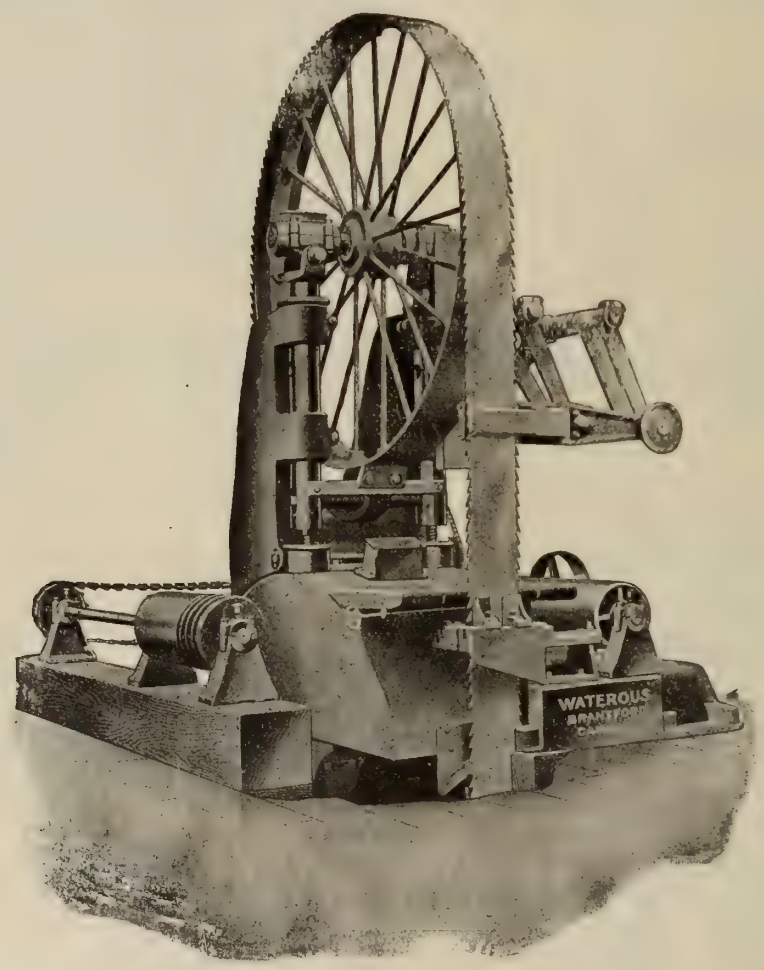

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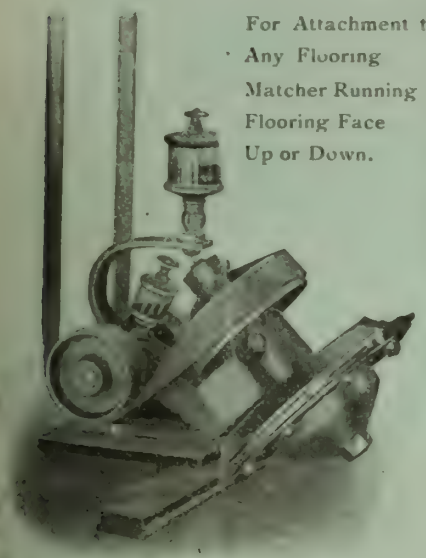

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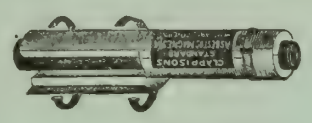

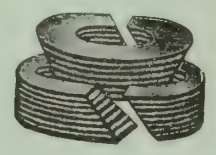

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JEFFREY WIRE ROPE

Conveyers for Logs, Lumber, Saw Dust, Refuse and Offal Shown in Catalog 80—Free

—THE—

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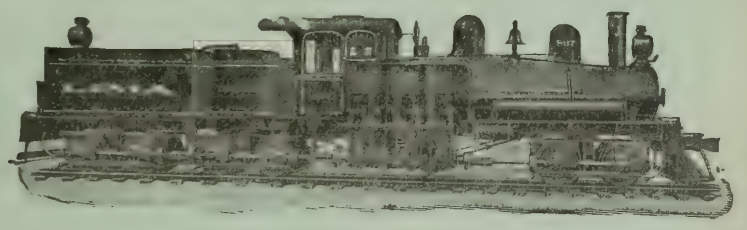

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Now, if you had a SHAY GEARED locomotive, you would walk right over that hill and have your logs at the mill in no time.

We also make A No. 1 direct locomotives of all designs. Catalog No. 14T describes all types. It is free. Write for it.

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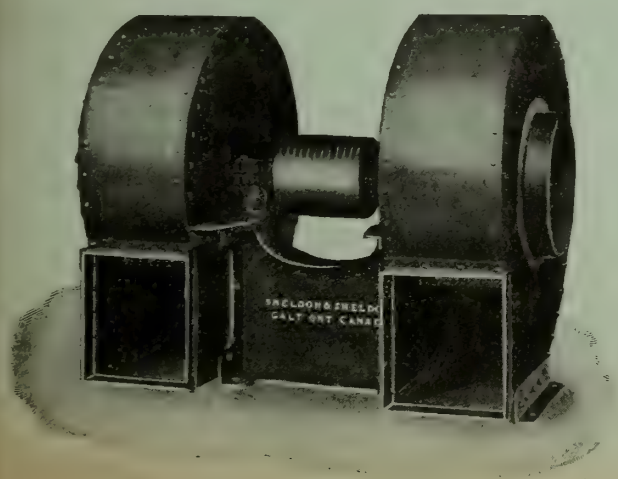

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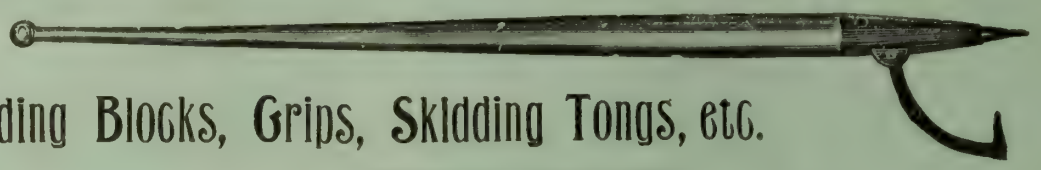

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you will save more than half the time usually lost in lacing belts. Consider—

How much do you lose every year by reason of machinery standing idle while belts are being laced.

You can stop over half of that leak by using the above named tools for running leather laces into belts. They will be sent to any address in Canada by mail on receipt of price with order, and with ordinary care they will last a life-time. *Price 50 Cents Each.*

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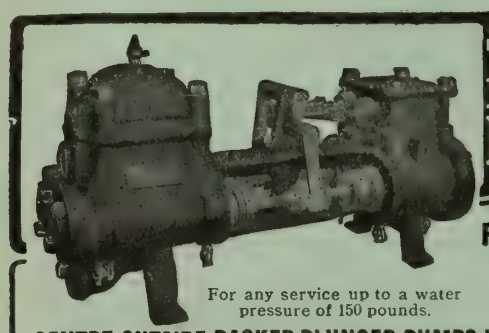

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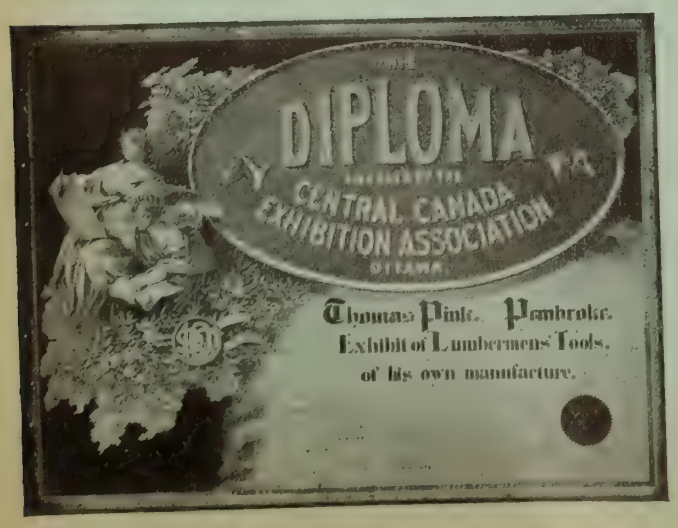

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The Standard Tools

In Every Province of the Dominion, New Zealand, Australia, Etc.

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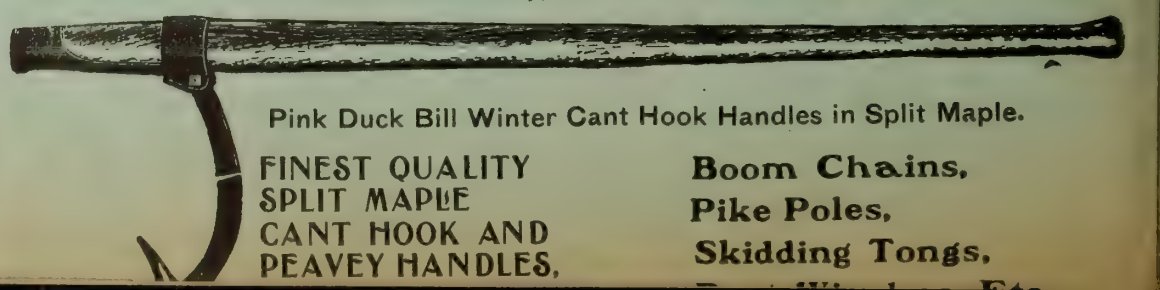

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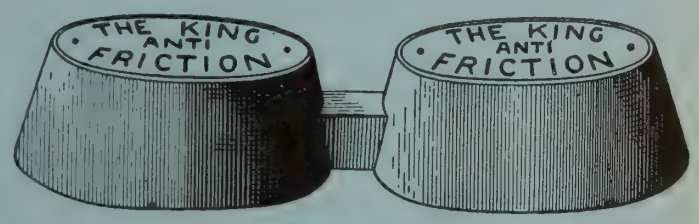

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Save Labor **Save Gumming**
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This Saw Stands Without a Rival

AND IS THE

FASTEST CUTTING SAW IN THE WORLD!

Its Superiority consists in its Excellent Temper. It is made of "Razor Steel," which is the finest ever used in the manufacture of Saws. We have the sole control of this steel. It is tempered by our secret process, which process gives a keener cutting edge and a toughness to the steel which no other process can approach.

Maple Leaf Saw Set

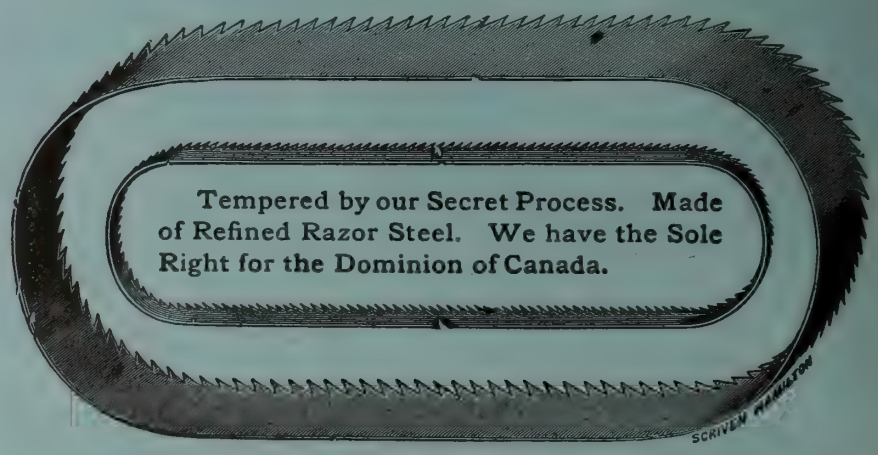
MANUFACTURED BY

SHURLY & DIETRICH, Galt, Ont.

Directions.—Place the set on the point of tooth, as shown in the accompanying cut, and strike a very light blow with a tack hammer. If you require more set, file the tooth with more bevel.

If you follow directions you cannot make a mistake. Be sure and not strike too hard a blow, and it will set the hardest saw. **On receipt of 40 cents we will send one by mail.**

We are the only manufacturers in the world who export Saws in large quantities to the United States.


Tempered by our Secret Process. Made of Refined Razor Steel. We have the Sole Right for the Dominion of Canada.
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HIGH GRADE BAND SAWS

Of All Widths and Lengths.

These Saws are made of Refined Razor Steel, and tempered by our Secret Process; for Fine Finish and Temper are not excelled.

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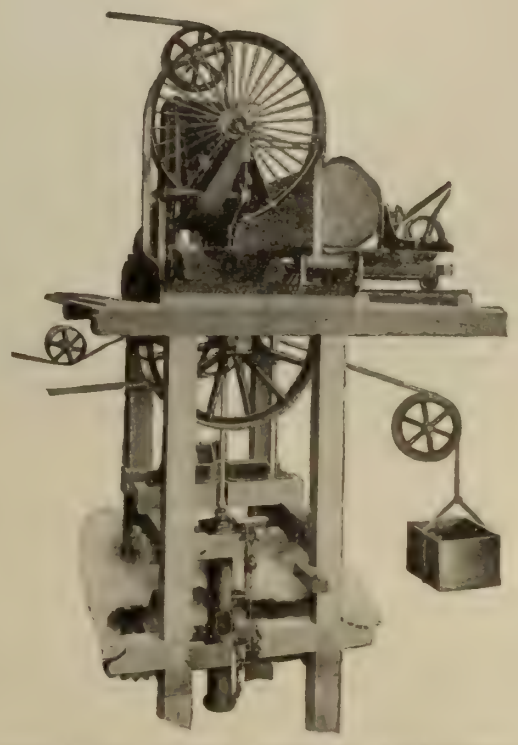

THE ALLIS DOUBLE CUTTING TELESCOPIC BAND SAW MILL is an entirely new departure. The mill is raised and lowered by a steam and oil ho st as easily as the guide is raised and lowered on the ordinary mill. The saw above the cut can be kept rigid and as short as possible at all times, and the surplus length of blade can be kept below the log instead of on top as with the ordinary mill. The Telescope Band Mill renders practicable the use of a double cutting saw. (See Bulletin 1700.)

If you want a Valve that **does not kick** get the new **ALLIS VERTICAL** for steam feeds. The vertical position of the valves allows of perfect drainage into the exhaust port at the bottom. It is easy working without leaking steam. With ordinary valves steam leakage is the cause of great loss of power.
(See Leaflet 1012.)

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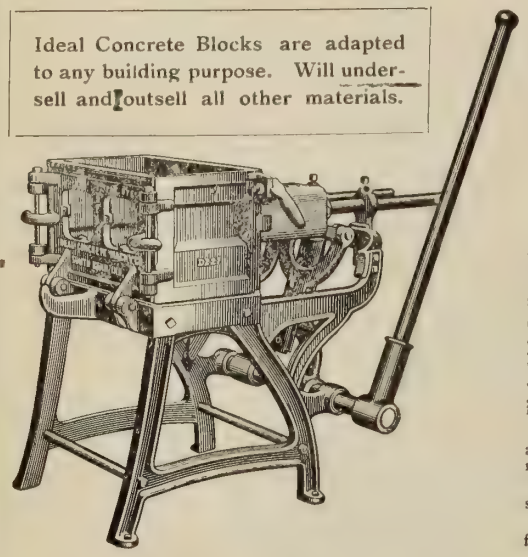
The Ideal Concrete Machine makes building blocks from sand, gravel and cement, and will help any dealer in building material double sales and increase profits.

Ideal Concrete Blocks are adapted to any building purpose. Will undersell and outsell all other materials.



IDEAL
Concrete Machines

Their rapidity of operation produces building blocks at the lowest possible cost. Embody the only principle (face down) permitting the practical use of rich facing material with less expensive material in back of blocks.

Adaptable as to size of block and countless designs of face and natural stone effect.

Wondertully simple. No chains, springs or gears.

Catalogue and fortune-making facts on application.

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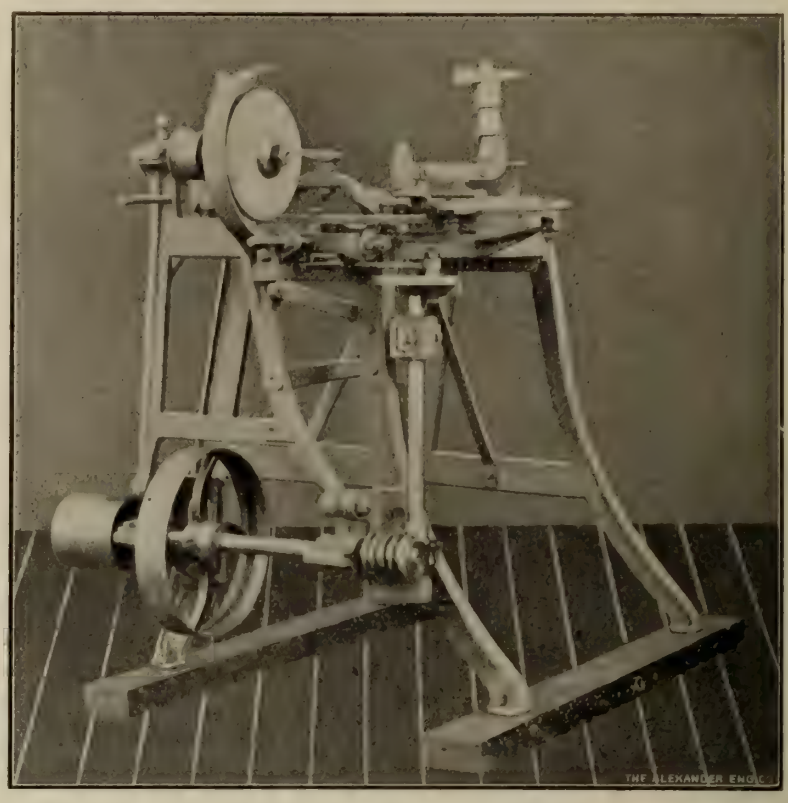
NUMBER THREE SAW SHARPENER

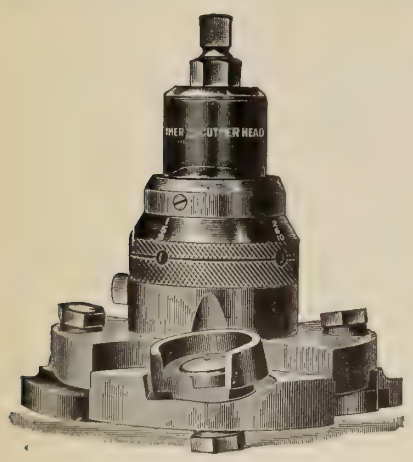


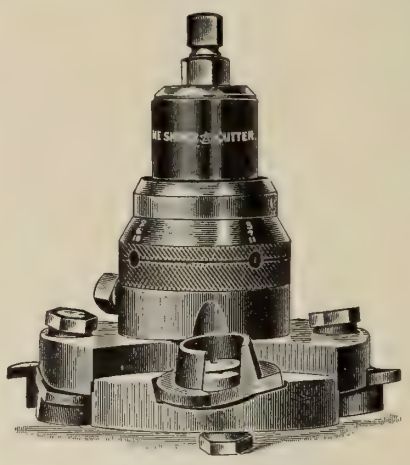
The above cut shows our number three **Antomatic Saw Sharpener,** for gumming and sharpening Circular Saws, either rip saws or cross cut saws; it will take a saw from 12" up to 84" in diameter; no mill should be without one of these machines; they are strong and will last a life time.

We manufacture **Saw Mill and Shingle Mill Machinery, Saw Carriages, Saw Frames, Log Decks, Loaders, Niggers, Set Works, Steam Feeds, Carriage Buffers, Live Rolls, Trimmers, Edgers, Lath Machines, Bolters, Etc.**

Write to us for Catalogue and Prices,

Mowry & Sons, Gravenhurst, Ont.





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For Hard Cross-Grained and Knotty Lumber.

A complete tool with Expansion Device for quickly adjusting the Bits for different thicknesses of tongue and groove edge.

FITTED WITH CIRCULAR BITS

Having a permanent profile and clearance protection, accurate, reliable and low priced. Simple in construction and easy to keep in order. A time and labor saving innovation.

Send for Catalogue containing prices and full particulars. Address—

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Lace Leather

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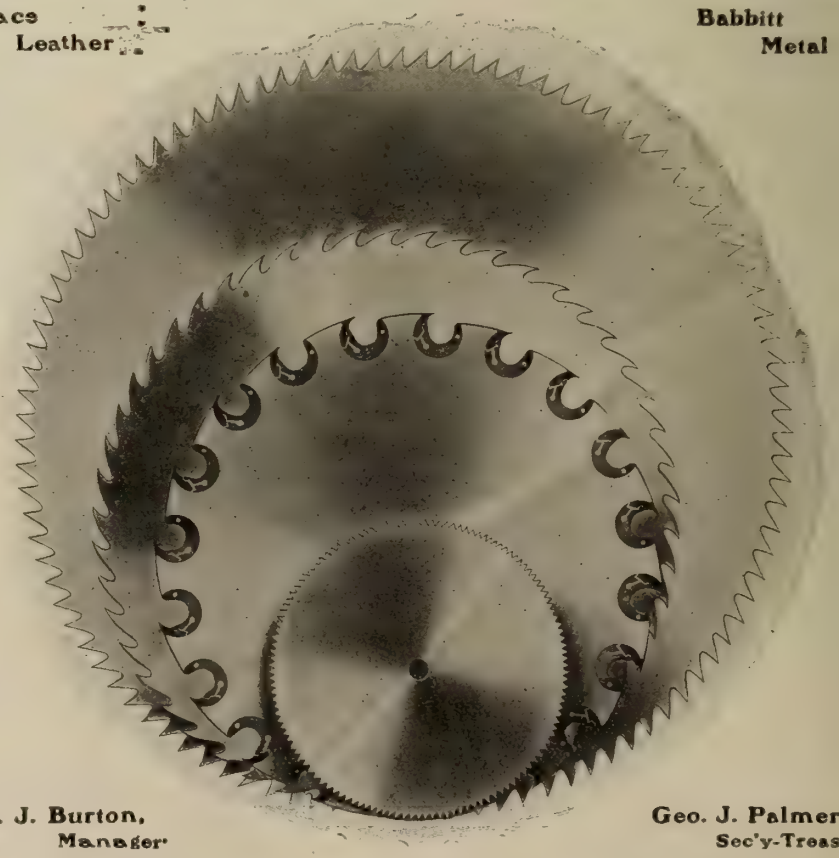

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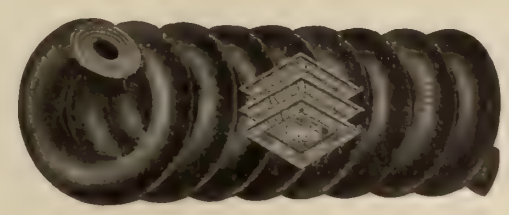
We make a Specialty of Hanchetts' Automatic Saw Sharpeners and Swages

THE A. J. BURTON SAW COMPANY, LIMITED
VANCOUVER, - B.C.

MANUFACTURERS OF
INSERTED TOOTH and all Solid Tooth Circular **SAWS**

COBBS HIGH PRESSURE SPIRAL PISTON AND VALVE ROD PACKING



"Cobb's" Packing is especially adapted to withstand heat and highest pressure. The rubber core is oil and heat-proof and will not harden, but remain elastic indefinitely. The outside covering is made of material that is not affected by heat. The lubricant employed is the result of much scientific research and is absolutely free from grit or acids.

We make everything in rubber requisite for an engine room. The following are some of our specialties:

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CANADIAN AGENTS: **THE ECONOMICAL MANUFACTURING & SUPPLY CO., Limited**
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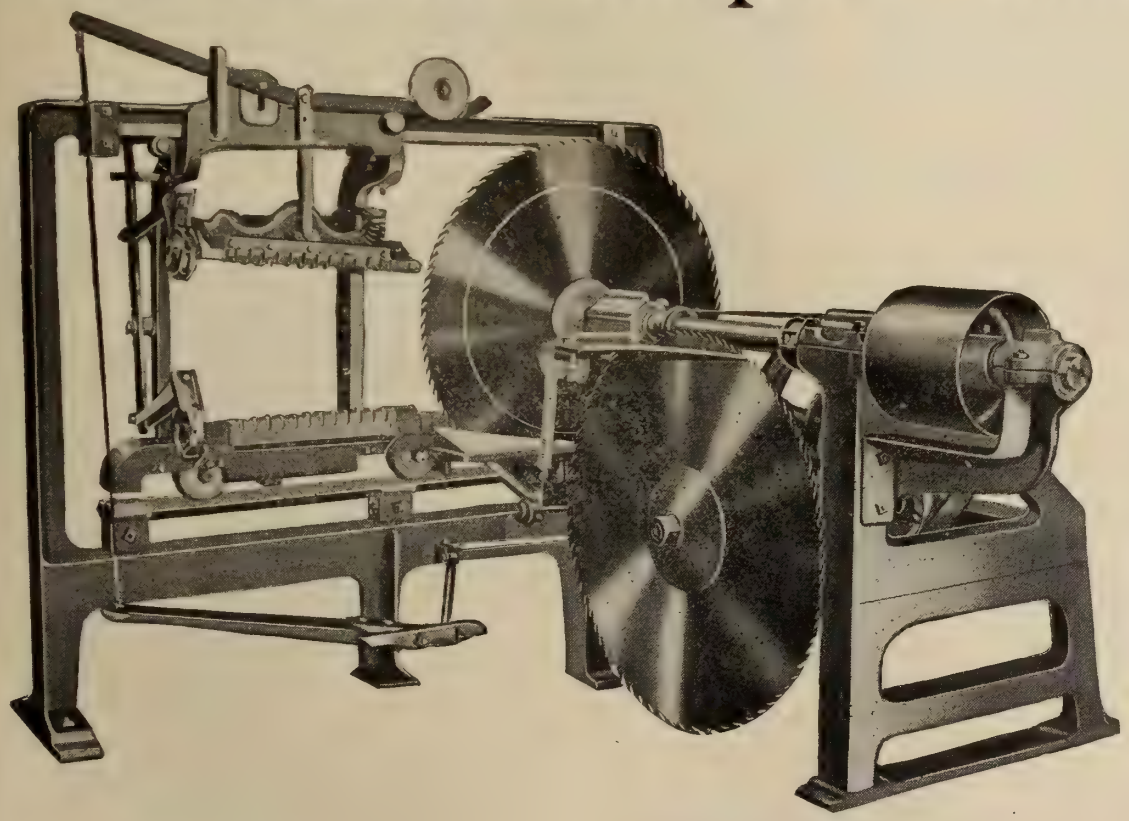
Iron Frame "Simplex" Shingle Machine



IN this, our latest design of Shingle Machine, we have incorporated all the advantages contained in our wood frame "Simplex" and added several improvements.

The arbor has been made heavier and a third bearing added to support it outside the driving pulley. The method of putting lead in the saw arbor has been greatly improved. This is now done by swinging on a centre directly under the saw the whole frame which carries the arbor. Thus the alignment of the bearings is not in any way affected and there will be no danger of hot bearings after the lead has been changed. The change may be made while the machine is running and without stopping the carriage.

An improvement has also been made in the method of driving the edger. It is belted direct from a shaft running at right angles to the main arbor from which it is driven by means of a bevel friction. This makes a very neat, compact drive and has proved satisfactory in the mill.

The rail on which the carriage travels is made of square steel and when worn can be renewed by simply turning upside down.

Over three hundred of our Upright Machines (wood and iron frames) are in use in British Columbia and Washington.

MANUFACTURED ONLY BY

Letson & Burpee, Limited, Vancouver, B. C.

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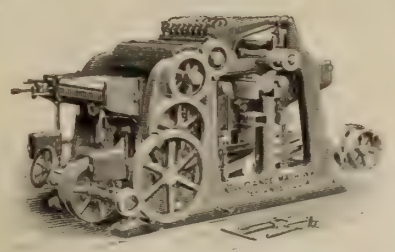

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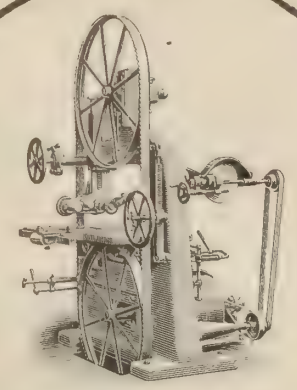

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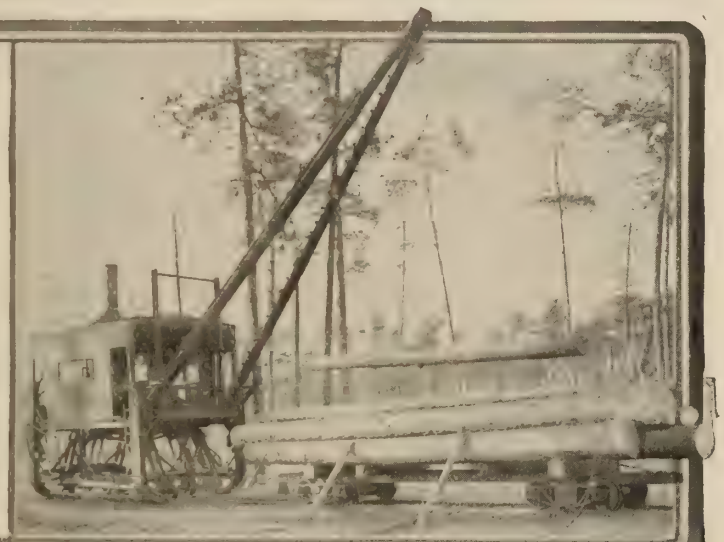

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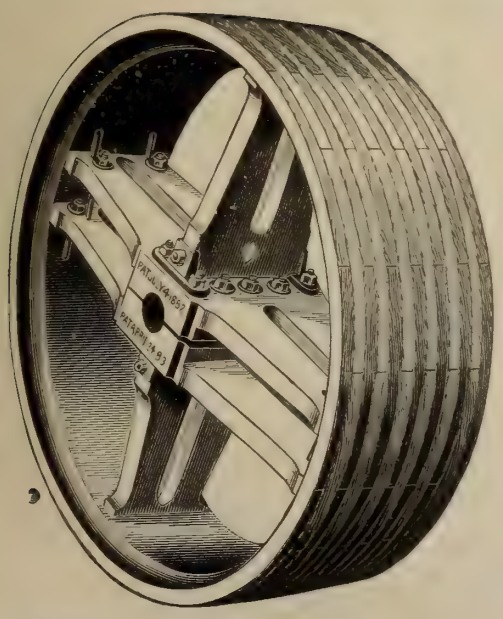

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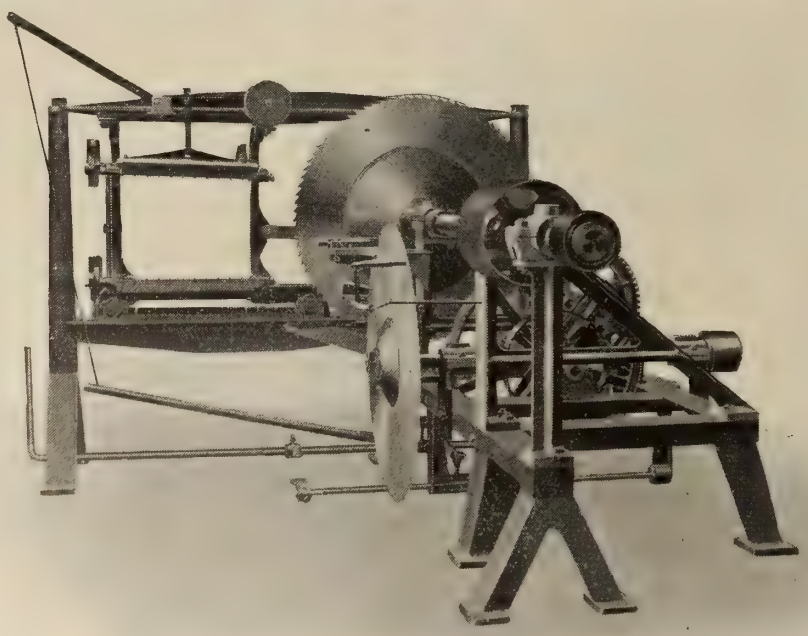

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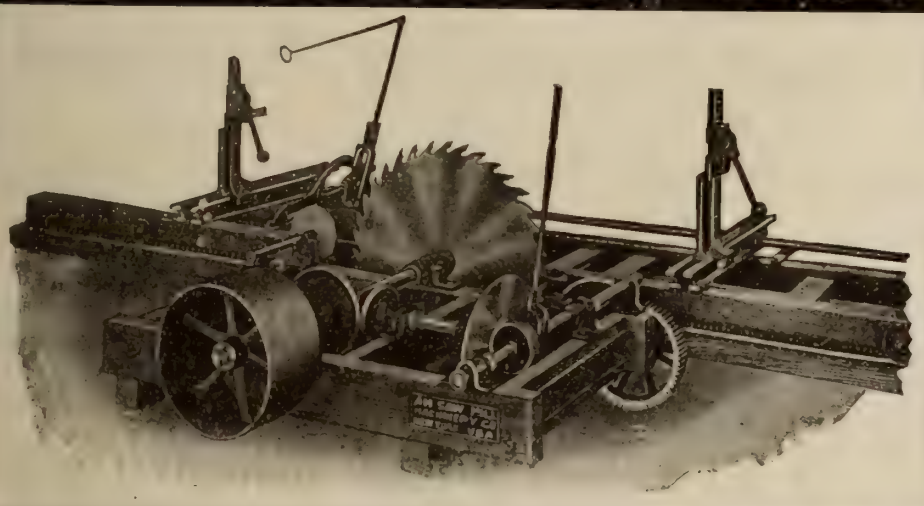

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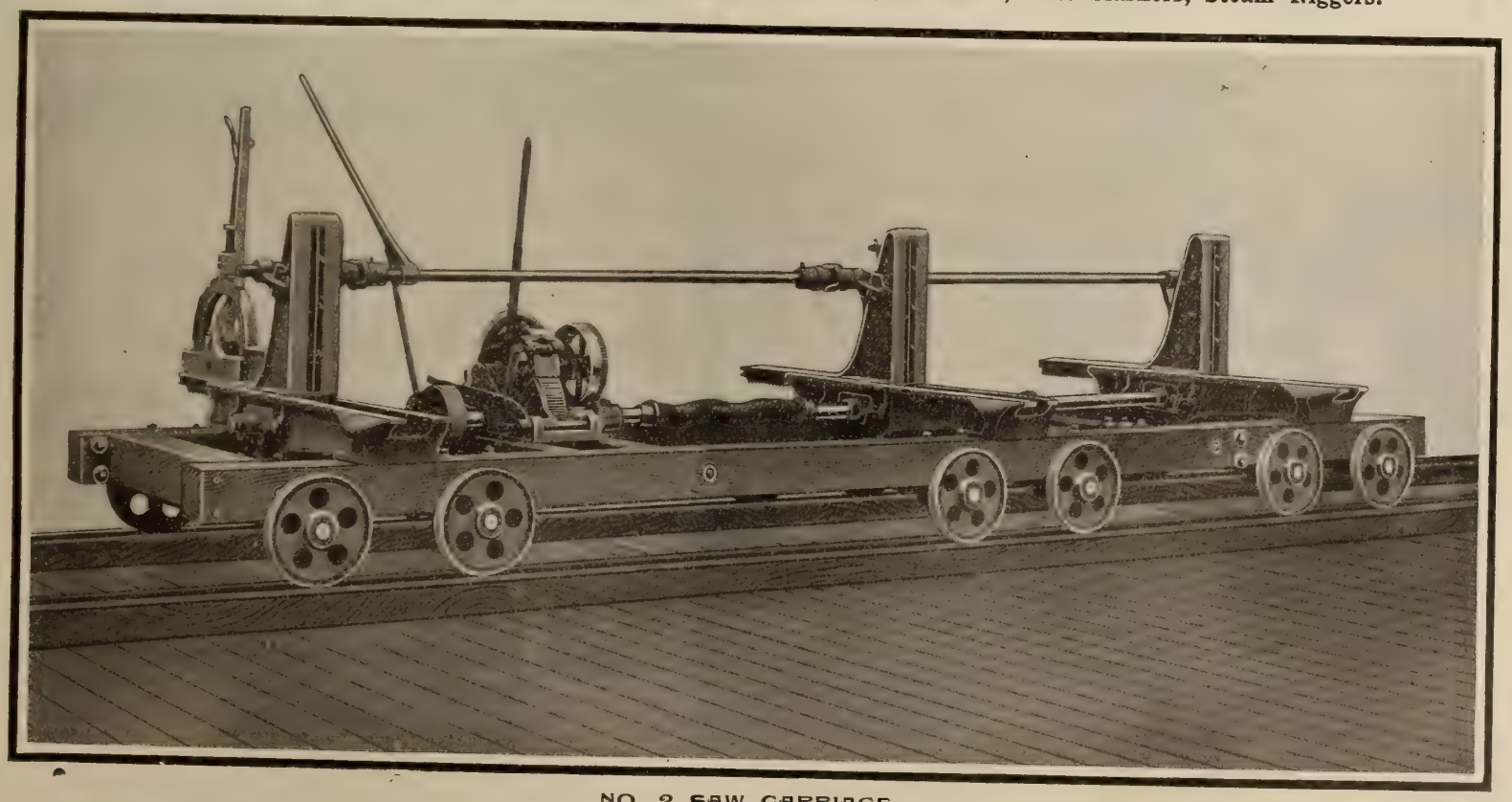

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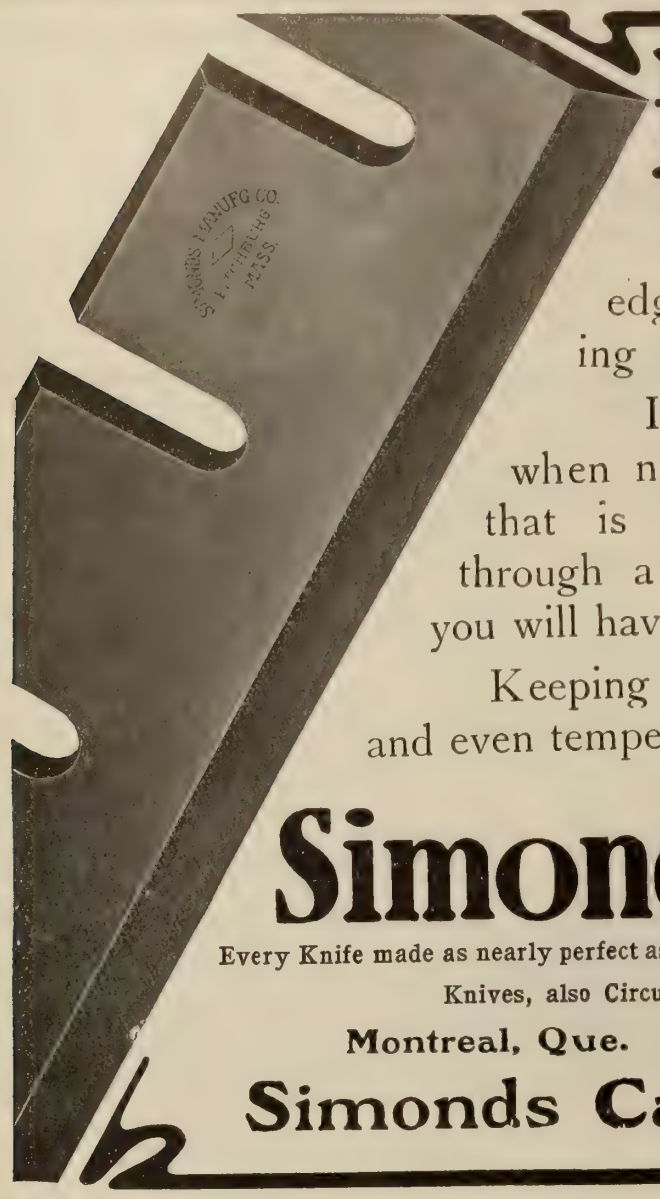

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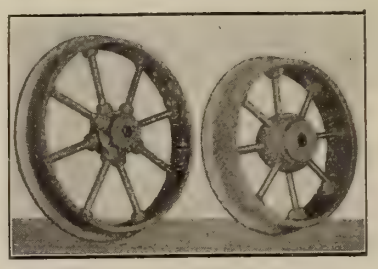

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CANADA LUMBERMAN
AND WOOD-WORKER

VOLUME XXVIII. NUMBER 5. } TORONTO, MONTREAL — MAY, 1907 — WINNIPEG, VANCOUVER { TERMS, $1.00 PER YEAR Single Copies, 10 Cents

CANADIAN SAW AND PLANING MILLS EQUIPPED WITH SWEDISH MACHINERY.

A saw milling establishment which is somewhat unique is to be found at Nordin, New Brunswick. This place was by name unknown until about two years ago, when certain capitalists from Sweden, recognizing the great future for the lumbering industry of Canada, decided to establish a saw milling enterprise on the Miramichi river a few miles from Newcastle, N.B. Here a thriving settlement has sprung up, and the postoffice has been given the name of Nordin.

The gentleman at the head of this Canadian-Swedish enterprise is Mr. O. W. Nordin, who has a wide experience in the lumber business in Sweden and France. To equip mills which would produce perfectly manufactured lumber has always been Mr. Nordin's aim, and he therefore decided to install in his Canadian mills machinery of Swedish manufacture. Equally good machinery might be found in Canada, but he reasoned that he could make no mistake by adhering to that which he knew to be good.

The Rosebank Lumber Company was organized, with a paid-up capital of $75,000, to carry on the saw milling business, Mr. O. W. Nordin being president and manager. Of the mill equipment the boilers and engines only are of Canadian manufacture, these being supplied by the Robb Engineering Company, of Amherst, N.S. There are two boilers and two engines, one engine being used for operating the electric light plant and for furnishing electric power. All the deals and boards are butted in the yard by electric power after the lumber is dried, so as to prevent splitting at the ends. Two gangs, two edgers, and a resaw comprise the principal machinery in the saw mill.

The planing mill department is carried on under the name of the Swedish Planing Mills Company, also capitalized at $75,000. Mr. H. E. Hedilius, who resides in Stockholm, Sweden, is president, while Mr. O. W. Nordin is manager. This mill has been equipped with special planers of large working capacity for the purpose of catering to the export trade in competition with the mills of Russia, Sweden and Norway. The lumber produced is excellently manufactured and is expected to find a ready market. The company is also considering the question of establishing a steamship line to ship lumber to Lake Ontario and Lake Erie points.

Interior views of both the saw and planing mills are shown on this page.

SAW MILL OF THE ROSEBANK LUMBER COMPANY, NORDIN, N. B.— INTERIOR VIEW.

PLANING MILL OF THE SWEDISH PLANING COMPANY, NORDIN, N. B.— INTERIOR VIEW.

BAND SAW VERSUS CIRCULAR.

Mr. T. A. McAllister, of Bird's Creek, Ont., sends us his views regarding band and circular saws, as follows: "As to the cutting of 3,000,000 feet of lumber out of logs ranging from 10 to 18 inch average diameter, if I had to install a plant to do that amount of work I would certainly install a circular mill, as the logs mentioned are of a small average and therefore small saws could be used which would permit of thin guage saws, which would draw the line of saving in kerf quite close to that of the band saw, and more particularly if the stock mentioned had to be manufactured into squares as heavy stock, which I would judge the jack pine and red pine would be to a great extent.

"The fact that a great many mill operators lose sight of is the proportioning of their saws to the size of their logs, as large circular saws that are adjusted for large cuts will not do good work in small logs, being inclined to draw over at the top and to draw the log from the blocks. Saws that are just about the size for the logs they are cutting will not do this. Saws from 40 to 50 inches diameter, 10 guage even, can be run very successfully, and saws of that size would handle the above mentioned stock all right, and would be the most profitable mill for that size and quantity of stock."

Mr. J. H. Lavallee, of Orillia, Ont., is at present on an extended trip to the Pacific coast and the Western States in the interests of his lumber business.

The Ball Planing Mill Company, Barrie, Ont., have recently made considerable improvements to their mill. They have installed blowers and new machinery, and their plant is now thoroughly modern in every respect.

Chair of Forestry at Toronto University

Professor B. E. Fernow, Appointed Dean of the Faculty, Gives His Views to the "Canada Lumberman and Wood-Worker."

The Board of Governors of Toronto University last month announced the appointment of Professor B. E. Fernow to the newly-established Chair of Forestry in that institution. Professor Fernow also becomes Dean of the Faculty and will therefore have entire charge of the forestry course.

Professor Fernow has for years been known as perhaps the most competent expert in scientific and practical forestry on the continent. Both in Cornell University and in Pennsylvania he has been the leader in those reforms, which had in view not only the preservation of the forests, but also the reforestration of many tracts unfit for other uses. Both as a teacher and as an author his reputation is international. He is a German by birth, and it was in Germany that he received his theoretical and practical training.

PROFESSOR BERNARD E. FERNOW,
Recently Appointed Dean of the Faculty of Forestry, Toronto University.

By request, Professor Fernow has sent THE CANADA LUMBERMAN the following letter touching upon the proposed forestry course and the relation of the forester to the lumberman:

Toronto, April 11, 1907.

Editor CANADA LUMBERMAN:

Dear Sir,—In response to your inquiry, I may say that I can at present speak only of my immediate task, namely, the organization of a College of Forestry. The object of this newly to be established Faculty is, of course, in the first place to impart technical information to students who propose to take up forestry as a profession. There are now some half dozen such schools in the States—which, by the way, cannot supply the demand for foresters fast enough—and it is proposed to establish in the University of Toronto a school that shall be second to none.

Educating men for a profession presumes that, when educated, these men will find employment, an opportunity of practising what they have learned and of earning their living by it.

It is true the profession of forestry is hardly yet practised in this country, yet experience elsewhere and in other fields has shown that whenever a class of specially trained men is available, their services are soon in demand. I have no fear on that score for any really competent graduate of the college who will have enough engineering, biological and other knowledge to make him useful in a number of directions.

Few people really know what a forester is and what he is about. To your readers I would therefore say as emphatically as I may, that a forester is nothing less than a lumberman—an educated lumberman, a harvester of wood crops.

There is only one difference between forester and lumberman, namely, an added obligation on the former of replacing the crop which he has harvested. This he may do either by the mere manner of cutting the crop of Nature, or otherwise.

The relation of the forester to the limit holder, then, about which you ask, should be that of an adviser as to methods of securing a more thorough use of his limits and of a larger revenue without destroying their reproductive capacity.

Eventually foresters will be managers of timber lands and logging operations, carried on with a view to the perpetuity of timber supplies. Graduates of a forestry school are, of course, no more fitted to jump at once into such positions than young medical students are to be entrusted with the lives of patients; but they are prepared to acquire the necessary experience in a shorter time than those without the technical training, and this experience they will have to acquire in the logging camps and through employment in inferior positions under limit holders or government.

That there is nothing chimerical in the expectation that such men will be employed as soon as they are available is proven by the experience of the States, where not only the government, but private lumbermen and railroad companies do employ foresters. Even in Canada, only lately three firms have seen fit to place a value on such service.

The government, that is, the people at large, are, of course, interested more than the limit holders in anything that pertains to the future of the resources of the country, and the first employment of foresters should, and probably will, come from the government, first to secure better knowledge of its timber holdings, and then to prepare plans for their better management.

I know perfectly well that it is dangerous ground to suggest changes in existing methods of procedure with reference to the disposal and use of timber limits. I am, therefore, not going to express any views regarding such changes until I have more closely studied the situation. This, however, I may say, that whatever forest reservations the government has made or may set aside should as soon as practicable be placed under technical management, and for this service our graduates are to be specially fitted.

It goes without saying that no forestry can be practised where protection against fire is insufficient, and the solution of this problem must in every case precede the application of forestry methods. For this service, too, the forestry students will be available, and their better education will not be detrimental to their efficiency.

Finally, I may add, it is proposed to enter upon a broad University extension work, with a view of educating the people in appreciation of forestry principles, and, as far as practicable, the Faculty of Forestry will be ready to give advice regarding their application to farmers and limit holders.

Yours truly,

B. E. FERNOW,
Dean, Faculty of Forestry.

THE LUMBER COMBINE INVESTIGATION

FINDING OF THE COMMITTEE.

The developments since our last issue in connection with the lumber combine investigation have not been of a startling character. On the concluding day, Mr. D. E. Sprague, of Winnipeg, president of the Western Retail Lumbermen's Association, was on the stand. He said he had been a member of the association for the past 40 years, and had been a director for five or six years. He had resided in Winnipeg for 33 years, and had established his business as a manufacturer of lumber in 1882. He now employs between 50 and 60 men, his annual cut ranging from 3,000,000 to 6,000,000 feet.

He declared that the consumer in Winnipeg got his lumber at reasonable prices. So long as the demand was good, prices would be maintained. He stated that in 1904 he had sold the lumber required to a departmental store in Winnipeg. The average cost on the lumber was $19 a thousand, and the only profit he made out of it was $1.25 a thousand, which was practically nothing.

He admitted that the retailers' association might have the effect of restricting trade to a certain extent. The association had this beneficial effect of requiring dealers to keep an assortment of lumber to meet the requirements of consumers at all points. He produced lists to show that the Canadian manufacturer charged $2 a thousand more than the United States manufacturer.

Mr. Sprague put forward the view that the co-operation of the Western Retail Lumbermen's Association with the manufacturers was the only practical means of maintaining uniformity in the price of lumber, and assuring it to the consumer at a fair margin of profit to the dealer. He argued that the provisions of the dumping clause should be applied to the lumber interest in order to prevent United States manufacturers from dumping their product into Canada in unfavorable times.

He summed up the position of the Western Retailers' Association as follows: (1) The association has no control whatever over prices or price lists; (2) it has no control over its members regarding prices and from whom they are to buy; it encourages them to buy from manufacturers who observe what it considers proper business methods in the sale of their product; (3) the association has no control over the manufacturers in the matter of making sales; they can sell to the members of the association, to non-members, or to independent yards, or they can sell to contractors or consumers.

Mr. Burrows, M.P., denied that his firm had refused to sell to consumers.

This concluded the taking of evidence by the committee, which later presented to Parliament the following report:

REPORT OF THE COMMITTEE.

"Your committee have during the course of their enquiry held some 30 sittings and examined 32 witnesses, and have had a large number of books, letters, price lists and other papers and documents laid before them as exhibits, which, together with the minutes of their proceedings, are herewith submitted for the information of the House.

"Your committee are of opinion that the prices charged for lumber are excessive. Your committee own that there has existed for some years past, and still exists, an association known as the 'Western Retail Lumbermen's Association.' This association included all three provinces until recently, when the leaders of Alberta formed a similar association of their own, called 'The Alberta Retail Lumber Association.' These two associations amount, in the opinion of your committee, to a combination, and the objects and results of the operations of these two associations have been to unduly enhance the said prices, as appears from the price lists themselves, and the by-laws, minute books and correspondence and evidence of witnesses in regard to the said operations.

"Your committee also find that more recently the manufacturers formed associations known as the 'British Columbia Lumber and Shingle Manufacturers' Association' and 'The Mountain Lumber Manufacturers' Association,' which in the opinion of the committee, amount to a combination, and co-operated with said retail association, and on the part of the manufacturers a good deal of evidence was submitted to show that their prices were not excessive, but before concurring in that view your committee think that there should be more evidence as to the cost of production to the manufacturers. Your committee also had to take into consideration the fact that the cost of lumber to the settler is naturally affected by the cost of freight, as well as by loss and profits of the manufacturer and the retailer.

"(Sgd.) T. GREENWAY, Chairman."

The above report was prepared by a subcommittee, comprising T. Greenway, E. A. Lancaster and William Sloan, and approved by the general committee.

DOUBLE CUTTING BAND MILL RECORDS.

The record-breaking production of any commodity in these days of improved methods and increased capacities is always a matter of interest. The cutting record of a saw mill is no exception.

The claim for a day's cut of ten hours from a double cutting band mill has been placed at an average of 7,500 feet per hour, but an Allis-Chalmers double band mill, installed in a mill of the El Dorado Lumber Company, of San Francisco, on the 27th of February, made a cutting of 8,620 feet per hour, or 86,205 feet per day of ten hours. This machine is a 14 inch double cut Allis band mill, and has been in use since last spring.

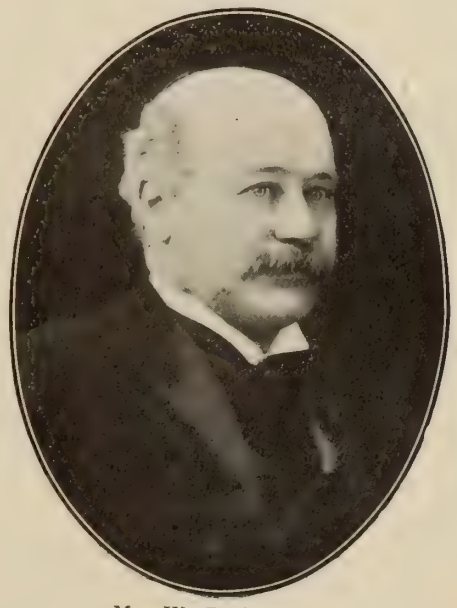
On the same day a single Allis band mill cut 73,964 feet, making a total of 160,169 feet for the day's run.

The record for the 27th, although remarkable, was somewhat bettered by the cutting made in the same mill with the same machines on the 28th, the day following. The single band mill cut 79,203 feet, and the double cutter 84,219 feet, both in ten hours, making a total of 163,422 feet for the day's run. The figures show that the cut of February 27th was not an extraordinary run for this mill. The superintendent in charge of the plant stated that the logs at the time of these two days' run were not any larger than the usual run of logs.

MR. W. B. SNOWBALL.

Mr. W. B. Snowball, who was elected vice-president of the Canadian Forestry Association, is a son of the late Honorable J. B. Snowball, Lieutenant-Governor of New Brunswick. He was born January 12th, 1865, and was educated at the Grammar School at Chatham and at the Upper Canada College, Toronto. He is largely interested in lumbering operations, being now the senior member of the J. B. Snowball Company, Limited, known as the largest exporters of lumber from the Miramichi. He is also a director of the Northwest Boom Company, Southwest Boom Company, Miramichi Steam Navigation Company, and the Miramichi Agricultural Exhibition Association.

Following in the footsteps of his father, Mr. W. B. Snowball takes a deep interest in public affairs. He has served as a member of the Chatham Town Council for several years, and was Mayor of the town during 1901 and 1902. He is now chairman of the School Board.



Mr. W. B. Snowball.

Mr. Snowball has been twice married, his first wife being Miss Harrison, of Woodstock, N.B., who died in 1894, and his second wife, Miss Harris, of Hamilton. His family consists of three sons and two daughters.

Mr. Snowball's election as one of the principal officers of the Canadian Forestry Association is but a slight recognition of his interest in forestry and the preservation and perpetuation of the forests of Canada. It is his aim to educate the public at large as to the necessity of carefully husbanding our timber resources and adopting a policy which will ensure an ample timber supply for generations to come.

Hon. John Charlton, former member of the Commons for North Norfolk, and one of the largest lumber operators in Canada, was married at Buffalo on April 6th to Miss Cora Owen. The Canada Lumberman and Woodworker extends congratulations to Mr. and Mrs. Charlton.

Kiln Drying Hardwood Lumber

The Forest Service of the United States Department of Agriculture recently issued Circular No. 48, on kiln drying hardwoods, which contains so much valuable information on this subject that THE CANADA LUMBERMAN AND WOODWORKER reprints it herewith:—

DIFFICULTY OF DRYING WOOD.

In drying wood, whether in the form of standard stock or finished product, the application of the requisite heat and circulation must be carefully regulated throughout the entire process, or warping and checking are almost certain to result. Moreover, wood of different shapes and thicknesses is very differently affected by the same treatment. Finally, the tissues composing the wood, which vary in form and physical properties, and which cross each other in regular directions, exert their own peculiar influence upon its behavior during drying. With our native woods, for instance, summer wood and spring wood show distinct tendencies in drying, and the same is true in less degree of heartwood as contrasted with sapwood. Or, again, pronounced medullary rays further complicate the drying problem. Plain oak and quartered oak require different treatments. Even in mahogany and similar tropical woods which are outwardly homogeneous, various kinds of tissue are differenciated.

THE WATER IN WOOD.

In the living tree and in green wood there is a large amount of water. Part of this is closely held in the material of the cell walls, and cannot be removed without affecting the physical condition of the wood; the rest, which fills the pores of the wood, is free water. In drying, the free water within the cells passes through the cell walls until the cells are empty, while the cell walls remain saturated. When all the free water has been removed, the cell walls begin to yield up their moisture. Heat raises the absorptive power of the fibres, and so aids the passage of water from the interior of the cells.

A confusion in the use of the word "sap" is to be found in many discussions of kiln drying; in some instances it means water, in other cases it is applied to the organic substances held in a water solution in the cell cavities. The term is best confined to the organic substances from the living cell. These substances, for the most part of the nature of sugar, have a strong attraction for water and water vapor, and so retard drying and absorb moisture into dried wood. High temperatures, especially those produced by live steam, appear to destroy these organic compounds, and therefore both to retard and to limit the absorption when the wood is subsequently exposed to the atmosphere.

Air dried wood, under ordinary atmospheric temperatures, retains from 10 to 20 per cent. of moisture, whereas kiln dried wood may have no more than 5 per cent. as it comes from the kiln. The exact figures for a given species depend in the first case upon the weather conditions, and in the second case upon the temperature of the kiln and the time during which the wood is exposed to it. When wood that has been kiln dried is allowed to stand in the open it apparently ceases to reabsorb moisture from the air before its moisture content equals that of wood which has merely been air dried in the same place and under the same conditions.

KILNS AND METHODS STUDIED.

Woods.—The studies upon which this report is based covered the following woods: White oak, red oak, maple, birch, basswood, chestnut, ash, red gum, mahogany, cherry and walnut.

Time Required.—The time consumed in drying, one of the most important items in the expense account, varies very widely among operators. Take, for example, 1-inch plain white oak, which is a standard material dried throughout the region studied. As a rule, this is dried from one to two weeks, yet many operators, even when crowded for kiln space, double this period, whereas at the larger and more progressive plants, especially those drying hardwood flooring, it is reduced to five, four or even three days. When the kiln is larger than necessary, it is a not uncommon practice to use it as a storage room for surplus stock.

The time of drying differs widely also with the species, as well as with the intended use. Quartersawed oak usually requires half again as long as plain oak. Mahogany requires about the same time as plain oak; ash dries in a little less time, and maple, according to the purpose for which it is intended, may be dried in one-fifth the time needed for oak or may need a slightly longer treatment. For birch the time required is from one-half to two-thirds, and for poplar and basswood, from one-fifth to one-third that required for oak.

Cost.—The information secured upon cost indicates—especially among smaller operators, where economies are less carefully studied—the widest divergence. The extreme figures, for products not widely different, are 75 cents and $5 per thousand feet.

Use of Kiln Dried Woods.—With the exception of structural timber, nearly all hardwoods are kiln dried before they are made into the finished product. A surface finish, such as that demanded in furniture and interior work, and the high degree of strength and stiffness demanded in vehicle and implement stock, are impossible without a thorough drying, and this drying is most quickly accomplished in a kiln. For the very exacting requirements of wheel work and of shoe last and printing type wood rapid kiln drying has not yet proved entirely satisfactory, but new and improved methods appear to promise success.

DEFECTS OF PRESENT METHODS.

Dry kilns are at present constructed and operated largely without thoroughgoing system. Forms of kiln and modes of operation have commonly been copied by one woodworking plant after the example of some neighboring establishment. In this way it has been brought about that the present practices have many shortcomings. The most progressive operators, however, have experimented freely in the effort to secure special results desirable for their peculiar products.

Results of Mistreatment.—Mistreatment of the material results in numerous defects, chief among which are warping and twisting, checking, casehardening and honeycombing.

Many woods, as, for example, tupelo and red gum, will warp and twist in drying unless special care is taken. This difficulty is not confined to kiln drying, but is quite as great in air drying. Indeed, drying in the open with exposure to the sun often develops the worst examples. In both cases the remedy lies in proper piling. In piling lumber for the kiln the cross sticks should always be placed directly over the trucks following a perpendicular line. Where the intervals between trucks are so great that intermediate sticks are required, heavy timbers should first be laid upon the trucks, to form a foundation for the pile. It is a good practice to place sticks at the very end of the pile.

If the kiln drying is too rapid the lumber may open up at the ends in deep checks. This defect is common to all grades of veneer stock and is most conspicuous in thin hardwood veneers. Frequently checks which appear after kiln drying were originally formed during previous air drying and are merely reopened in the kiln. These may readily be distinguished from fresh checks formed in the kiln, since their inner surfaces have been filled with dust and darkened by the weather. It appears to be almost impossible to prevent their reopening.

Casehardening occurs when the kiln drying is pushed too rapidly without proper precautions. The surface of the wood becomes dry and impervious, while the interior remains almost as moist as before. Thorough drying is thus quite prevented, and effort to secure it usually produces honeycombing.

Honeycombing can occur only together with casehardening. It is, in effect, internal checking, in which the checks, following the medullary rays, may run nearly from end to end of the piece, but do not, except in extreme cases, show upon the surface.

THEORY OF DRYING.

Despite the diversity of practice, it is possible to find among the larger and more enterprising operators a measure of agreement, as to both methods and results, and from this to outline the essentials of a correct theory.

Before any drying occurs both the wood and the water it contains must be raised to the temperature at which the drying is to take place. If the wood is slowly heated and circulation is meantime suffered to carry off the surface moisture as fast as it is vaporized, the surface becomes entirely dry before the internal moisture is even moderately heated or has begun to move in quantity to the surface. Moreover, if preliminary air drying has taken place, it should be remembered that more moisture has been lost from the surface than from the interior, and that it is important that this condition should not be accentuated in the kiln. It is necessary, therefore, that surface drying be delayed in the kiln by retaining the moisture first vaporized about the wood while the continued heat penetrates to the internal moisture. Thus far this is essentially the moist air system of drying. Steam may be used to advantage to wet the wood, and though this increases the water content it shortens the time required for drying by quickly raising the wood to the drying temperature.

When once the wood has been raised to a high temperature through and through, and especially when the surface has been rendered most permeable to moisture, drying may proceed as rapidly as it can be formed by artificial circulation, provided the heat lost from the wood through vaporization is constantly replaced by the heat of the kiln.

The drying is actually carried out by admitting hot, unsaturated air to contact with the heated wood and replacing it constantly as it becomes saturated. The best rate of circulation for the air, as well as the best degree of humidity, is still unsettled. Provided the internal moisture is kept moving toward the surface as rapidly as the surface moisture is removed, the problem of hastening the drying by increasing the circulation and regulating the humidity is comparatively simple. It should be quite possible to discover by simple experiments what means of fulfilling the conditions are suited to the drying of lumber on a commercial scale.

Successful kiln drying depends chiefly upon these two principles and upon keeping separate the two distinct stages of the process which they govern.

To carry out right drying principles a rightly constructed kiln is necessary. The essentials of kiln construction, deferring details for the present, include the following points:

The system of heaters and radiators should be capable of maintaining the desired temperature at all times.

The temperature and humidity of the drying chamber should be under perfect control and protected from outside influences.

Simple devices should control the circulation as desired, both between the kiln and the outer atmosphere and between the two ends of the kiln.

Toward the end of the process abundant and vigorous circulation should be provided for, due care being taken not to lower the temperature.

THE DRY KILN.

Types.—As regards construction there are two general types of dry kilns. In the radiator kiln the timber is heated by coils of steam pipes under the floor; in the blow kiln heat is supplied by a current of air heated outside the kiln and forced in by a fan.

The common designations are "hot blast" and "moist air" kilns, but these refer to methods of operation rather than to construction. Moist air kilns, whether of the blower or the radiator type, are managed on the moist air principle.

Parts.—The essential parts of a dry kiln are the drying chamber, the steam coils and the ventilating device.

The drying chamber varies greatly in length, according to the output desired and the process used. It may be as short as 15 feet or as long as 150 feet, with a width of from 10 to 30 feet. Though it may be made of a number of materials, wood is widely used where the building laws permit. The choice of material depends otherwise upon the kind of lumber to be used and the thoroughness of drying desired. Some of the best drying is done in brick kilns with concrete foundations.

The steam coils which furnish the heat have various forms in both types of kilns. In the radiator type they extend under the floors from the "dry" end of the kiln part way or all the way to the oppo-

site end. They may be of single, double or treble thickness of inch pipe, according to the heat required. To secure provision for their contraction and expansion, and for their drainage, special attention is given to their installation. In the blower type of kiln there are no steam pipes in the drying chamber itself; the heat is supplied by air heated outside and forced into the kiln by a fan.

To maintain in the kiln the circulation of air needed in drying, there are a number of devices, of which the simplest is possibly a system of ventilator shafts for removing the lighter moist air from the top of the kiln. In blower kilns a fan is used for the same purpose, and in some radiator kilns in which the humidity is kept very high the only outlets are heavy dampers, through which the air must force its way. There are certain makes of both radiator and blower kilns operated on the moist air principle which are equipped with condensing chambers for the removal of a portion of the moisture from the air.

Doors are made of a number of materials, of which canvas and wood are most widely used. The doors are never hinged, but slide along a track or in grooves, or are counterbalanced so as to be thrown up like windows.

The lumber is carried through the chamber on trucks holding from one to three thousand feet, or even more. These are usually of steel bars, 6 feet long, with a wheel at each end. According as there are two or three tracks in the kiln, two or three trucks are used. In piling the lumber upon them the pieces are not placed in contact, but, as in piling for air drying, are "stuck"—that is, held separate above and below by inch strips laid crosswise.

Methods of Operating.

There are two methods followed in kiln operation —the progressive and the charge systems. The progressive system requires a kiln of considerable length, say upwards of 50 feet. Temperature and moisture are so distributed in the kiln that in passing from the green to the dry end a load of lumber is first moistened, then heated, and finally dried out. In this way all stages of the process are under way in the different parts of the kiln at once. Circulation may be carried on by a draft lengthwise of the kiln, which carries back the moisture from the dry end of the kiln and deposits it on the wood in the wet end, or, where the extreme moist air drying is practiced, there may be no such longitudinal circulation and very little circulation of any kind. In the latter case the humidity is very high, even at the dry end. The temperature may be fairly uniform throughout the whole length of the kiln, in which case the wood must be very hot on exit to insure the removal of residual moisture, or a difference of 20 degrees to 40 degrees F. or more may exist between the two ends. The progressive system of operating is most widely employed in factories where the wood to be dried is of fairly even thickness and quality and where the drying is done in large amounts and continuously.

Kilns for operation in the charge system are typically square. The kiln is charged and this charge is dried before fresh material is admitted. Wheeled carriages may be used to carry the material, or it may be piled upon the floor or arranged along the walls. For novelty works and other establishments with a highly varied product of which similar amounts are dried at once, this method is widely employed, and wherever particular attention must be paid to the thickness and quality of the stock it probably yields the best results. Conditions are controlled entirely from outside the kiln and are varied to suit the operator's ideas of the requirements of the case.

Drying may be continuous or intermittent. From necessity or economy many kilns are operated only by day. At night, in such cases, the heat is shut off, the blower is stopped, and the temperature is allowed to fall, while the humidity may reach the dewpoint. Intermittent operation is not adapted to yield the best quality of product. It would be highly expensive, owing to the loss in heat in restoring the drying temperature in the morning, were it not that in this case only exhaust steam is used.

Where the drying is continuous, the kiln is supplied with live steam when the engines are shut down at night. This means that drying progresses evenly. The material is held at a regular temperature and, provided the humidity does not fall too low, checking and warping are less apt to occur.

Moist Air Drying.

It has been pointed out that moist air drying can be carried on in both blower and radiator kilns, and that the moist air system has the wider use. Builders of radiator kilns, however, generally advertise them as moist air kilns and refer to blower kilns as hot blast kilns. They lay stress on the damage done to the heavier grades of stock by treatment in a fan kiln and deprecate the use of any kiln with forced draft. Careful study shows that as a matter of fact most successful kilns drying lumber heavier than pin and poplar are operated on the moist air system, whether or not they are equipped with a fan. Moist air can easily be secured in blower kilns by using the saturated air as it leaves the kiln, or by admitting wet steam either into the heater itself or into direct contact with the lumber in the chamber, and in radiator kilns by merely closing the drafts and gradually raising the temperature. The humidity is generally secured by steam, some operators, during winter, secure it by piling snow upon the lumber as it enters the green end of the kiln. In any system of moist air drying where no fan is used the lumber, upon coming out of the kiln, retains a residuum of moisture, which evaporates from the heated surface in the open. For this reason many operators, especially when the weather favors, or shed room is available, keep the stock exposed to the fresh air for a day or two after it leaves the kiln.

Most of the past and present improvement in the kiln drying of lumber follows the line of moist air operation.

Preliminary Seasoning.

Hardwood lumber is commonly air dried at the sawmill for a period of from two to six months. Present demand for lumber is, however, so great that there is strong inducement to market it as air dried when actually it is nearly or entirely green from the saw.

To supplement the drying at the mill, or to make up for it when it has been omitted, kiln operators who are particular about the quality of their product very often pile the stock, as it comes from the cars, in their own yards, and allow it to air dry there for a few months or even for a year or two. This yard drying unquestionably improves the stock, and indeed is indispensable for certain types of kilns. On the other hand, for kilns which yield the best results when considerable moisture is present, green material may be most suitable. It is probable that, for the sake of economy, yard drying will be eliminated in the kiln drying of the future without loss to the quality of the product.

The extreme form of preliminary seasoning is found in the shed drying of stock as practiced by vehicle and implement makers. Shed drying for two or three years leaves so little moisture in the wood that the kiln drying which follows is but a very brief process.

From shed drying it is only a little further to the treatment given to such close grained woods as boxwood, which is dried for wood engraving blocks. Such blocks are wrapt in pieces of coarse gunny sack and stored in small barrels or boxes in a temperature of about summer heat, very frequently in a room directly over a kiln. After about a year the blocks are completely dried. So tedious a process can, of course, be profitable only when the product must be absolutely free from checks and other imperfections.

Preliminary Use of Steam.

In addition to supplying heat to the kiln, steam may be used either to maintain the proper humidity in the kiln, as in certain kinds of moist air operations, or to moisten and heat the lumber before it enters the kiln. For preliminary steaming in the progressive system of drying, a steaming chamber must be provided at the green end of the kiln; with the charge system the drying chamber may be used instead.

Wet Steam.—In preliminary treatment with wet steam, when the drying is progressive, provision is made at the green end of the kiln for a steam chamber. This may be detached from the drying chamber or may be a part of the drying chamber cut off from the rest by a wooden or canvas partition. It is large enough to hold a single truck of lumber. Under the floor there is a perforated steam pipe, usaully running diagonally across the bottom. If the heat of the unconfined steam which enters through the perforated pipe is insufficient, as may be the case if the kiln is of wood and much heat is lost, the steam radiators used throughout the kiln in heating the charge may also extend under this floor. The loaded truck is run into the steam chamber, the outer doors are closed as tightly as possible, and steam is admitted. Although in one sense steam thus used may be regarded as live steam because the pipe conveying it runs directly from the boiler to the steaming chamber, the pressure when it is released in the chamber is reduced in effect to zero, so that it is really exhaust steam. The pressure of true live steam, though no greater than a single pound per square inch, would destroy a chamber built of ordinary masonry.

Duration of treatment varies with different operators; it depends mainly upon the efficiency of the steaming chamber and method of drying which is to follow. The longest steaming noted in this study, thirty hours, was given where a completely detached wooden kiln was operated on the charge system. The shortest, two hours, sufficed with a concrete kiln in which a single truck load was steamed at one time, preparatory to treatment in a blower kiln equipped with condensing coils.

Live Steam.—A steel retort, or boiler, capable of withstanding considerable pressure, is necessary for preliminary treatment with live steam. Though at present not in wide use, this method appears to promise exceedingly well. It is true that when operations are on a large scale an extra handling of the lumber is necessary to move it from the steaming retort to the kiln, but the reduction of the time subsequently needed for drying is so great as to offset this and result profitably. A further saving is effected by the fact that green timber, fresh from the saw, can be treated as readily as older stock, sometimes apparently more readily, so that preliminary seasoning may be dispensed with. In respect to the effect of live steam on the strength of wood, experiments upon loblolly pine railroad ties have shown that long treatment does not produce weakness, 20 pounds pressure for four hours having been shown to reduce the strength about 16 per cent., though a portion of this loss was regained upon subsequent seasoning. It is quite certain, however, that the brief steaming preparatory to kiln drying, which lasts only from five to fifteen minutes, will have only very slight effect, or no effect at all, on the strength of the material.

Submersion in Water.

Prolonged submersion of wood in water is believed to prepare it well for drying. The probable reason for this is the leaching out of the sap constituents, so that the cell cavities finally contain approximately pure water; for the organic sap, as we have already seen, appears to hamper the extraction of water in drying. In rafting, logs frequently remain a long time in water before they are sawed, and the lumber cut from such logs is held to dry more readily and thoroughly. For the past two years the Forest Service has been conducting experiments on the influence of submersion upon subsequent air seasoning. These experiments are not yet concluded, but present results add weight to these views. The effect of submersion upon subsequent drying varies with species and climate.

Testing the Results.

For thoroughly testing the effects of kiln drying on wood, methods must be employed which call for specially trained men. The quality of workability in the mill, for instance, though hard to explain to the tyro, is readily recognized by planing mill men, sawyers and woodworkers generally.

Kiln dried material should work smooth under the planer and sander; should pass through the saw with a peculiar resonance, and should stand up to cutting edges of all descriptions with little tearing of the fibre. Improperly dried material tears out either with or across the fibre, and can be given a polished surface only with difficulty. Workability is thus rather a complex quality; it is determined by the general judgment of the trained workmen handling the stock.

Differences of color, smell and resonance, by which also the experienced kiln operator judges his stock, are almost as difficult for the layman to distinguish.

Measurement of shrinkage and of loss in weight forms a somewhat more scientific test for freshly kiln dried material. For this, discs are cut from the middle of kiln dried stock and carefully measured, either with a scale or by tracing their outline, and are also weighed. The discs are then put in a hot box or placed directly on a steam pipe, with free circulation of air. After being heated for a few days to a temperature higher than that in the kiln, they are remeasured or compared with their former outline to determine shrinkage, and reweighed to determine loss in weight. The extent to which kiln drying has fulfilled its purpose is thus brought out.

Unsolved Problems.

That the foregoing discussion of hardwood kiln drying is incomplete is due to lack of exact information upon a number of points of more or less importance. It may prove helpful to call special attention to several of these.

Physical data of the properties of wood in relation to heat are very meagre. Figures on the specific heat of wood, for instance, are not readily available, though upon this rests not only the exact operation of heating coils for kilns, but the theory of kiln drying as a whole.

Great divergence is shown in the results of experiments in the conductivity of wood. It remains to be seen whether the known variation of conductivity with moisture content will reduce these results to uniformity.

The maximium temperature to which the wood may be exposed without serious loss of strength has not been determined.

The optimum temperature for drying is entirely unsettled.

The inter-relation between wood and water is as imperfectly known to dry kiln operators as that between wood and heat. What moisture conditions obtain in a stick of air dried wood; how is the moisture distributed; what is its form? What is the meaning of the peculiar surface conditions which, even in air dried stock, appear to indicate incipient casehardening? These questions can be answered thus for only by speculation or at best on the basis of incomplete data.

Until these problems are solved kiln drying must remain without the guidance of complete scientific theory. The Forest Service is now studying the effect of temperature and steam pressures used in drying upon the strength of wood, and will take up other related problems as opportunity permits.

THE
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Special care is taken to secure for publication in the Weekly Lumberman the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the Canada Lumberman and Wood-Worker is undoubtedly the most direct and profitable advertising medium. Special attention is directed to "Wanted" and "For Sale" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

GRAND TRUNK SWITCHING CHARGES.

During the past two months the Grand Trunk Railway has been making a charge against freight shipments under certain conditions which is not calculated to raise the officials of that road in public esteem. Heretofore it has been the custom of the railroads to recognize the principle of reciprocity in connection with the delivery of cars on sidings, but on the first of March last the Grand Trunk Railway sprung a surprise upon its customers by attempting to collect charges for cars delivered on the switches of other railroads, these charges being in addition to the through freight rate. The public objected, but the railroad has adhered to its peculiar position, making it necessary to appeal to the Railway Commission for redress. This is now being done through the good offices of the Canadian Manufacturers' Association, and the result seems evident.

The credit for this inovation and consequent disturbance in shipping circles belongs to the Grand Trunk Railway alone, and apparently does not meet with the sympathy of the other roads. The Canadian Pacific, we understand, continues to deliver cars on Grand Trunk switches without making an extra charge, thus recognizing the fact that such charge should be and is absorbed in the general charge.

To the lumber dealers in Toronto the action of the Grand Trunk Railway is a serious matter, as most of the lumber which comes into the city originates on that road and is therefore subject to the increased expense when transferred to Canadian Pacific or Canadian Northern switches. The charges are by no means infinitesimal, being one cent per hundred pounds, with a minimum of $3.00 per car for certain districts and $5.00 per car for other districts.

We cannot think that the Grand Trunk management is wise in allowing this matter to go to the Railway Commission for adjustment. Not only is it an unfair charge, but also a violation of the Railway Act, which distinctly states that there shall be no discrimination against localities. The manufacturer located on the G. T. R. who sells his lumber to a dealer in Toronto, for instance, with C. P. R. switches into his yard, certainly suffers from discrimination in favor of the manufacturer located an equal distance from Toronto on the C. P. R. who would make direct delivery. The extent of such discrimination is the amount of the switching charges above mentioned. When competing for the business of that particular yard, the manufacturer on the C. P. R. has the advantage, reason how you may.

It is difficult to understand the position the Grand Trunk Railway has taken and what is to be gained in the end. The result so far has been a loss in trade owing to the preference given to other roads. This, however, is not a very satisfactory condition, as it tends to aggravate the congestion of traffic which has been so pronounced for the past two or three years.

OUTLOOK FOR WESTERN LUMBER SHIPMENTS.

In the northwestern provinces of Canada an exhibition of railroad administration which probably could not be beaten for inefficieney has been given us during the past winter by the Canadian Northern and Canadian Pacific Railway lines. Their incapacity has, for the present at least, been incalculably detrimental to that country, and the present outlook is quite as serious as at any other time during the past three months. Through it all there have been, according to western reports, the most glaringly false attempts to minimize the worst features of the trouble and foster the impression that the complaints were exaggerated.

Not the least of the sufferers have been the western lumbermen. What their financial loss has been for the past few weeks, and will continue to be in the immediate future, it is impossible to say. The railroad companies have recently advised them that they cannot possibly supply sufficient cars to take care of more than sixty per cent. of the output of the mills, and that car shortage is liable to continue for the next eight months or more. This being the case, the output of western lumber mills will have to be curtailed about forty per cent. This curtailment necessarily involves an increase in the cost of production, as there are certain fixed expenses in connection with the running of a mill which remain constant, irrespective of the ouput. Many of the mills are now piled up with stocks of lumber awaiting shipment, while every day orders are being refused for lack of cars.

When a measure of relief does come later in the season, it is difficult to predict just to what extent this will help the lumberman. Live stock, wheat, lumber and coal is the order in which western products may be graded in respect of the preference shown them by the railroads. Live stock must always be forwarded without delay. Wheat comes next, and naturally so, as upon its movement from producer to consumer depends the very existence of the population. Morever, from Moosomin to Fort William a car of lumber can on the average make but six trips a year at a round freight return to the railroad of $250 a trip, whereas, between the same two points, a car of wheat can make a trip every eight days, from which the railroad benefits to the extent of about $100. In the one case the lumber car for the year earns about $1,500, and the grain car, providing it travels uninterruptedly for eight months of the year, $3,200, more than double. The result is obvious. The lumberman must be content to wait his turn at the best of times. At the present moment his outlook is gloomy indeed. Ordinarily coal is last on the list in point of preference in granting cars. When tranquility once more pervades the fuel situation in Western Canada there will be some coal to ship, and in no inconsiderable quantities either, so that lumbermen will probably be relegated to last place in obtaining cars.

Sir Thomas Shaughnessy recently admitted that the volume of traffic of late has been in excess of the C. P. R.'s facilities, but hastened to point out that during the past five years in order to meet the amazing growth of the country's business the Canadian Pacific Railway Company has expended $72,000,000, or over $14,000,000 per annum, in rolling stock, improvement of roadbed, sidings, extensions, shops, round houses and general equipment, and that the company now has on order for delivery during the next four or five months rolling stock equipment to the value of nearly $12,000,000.

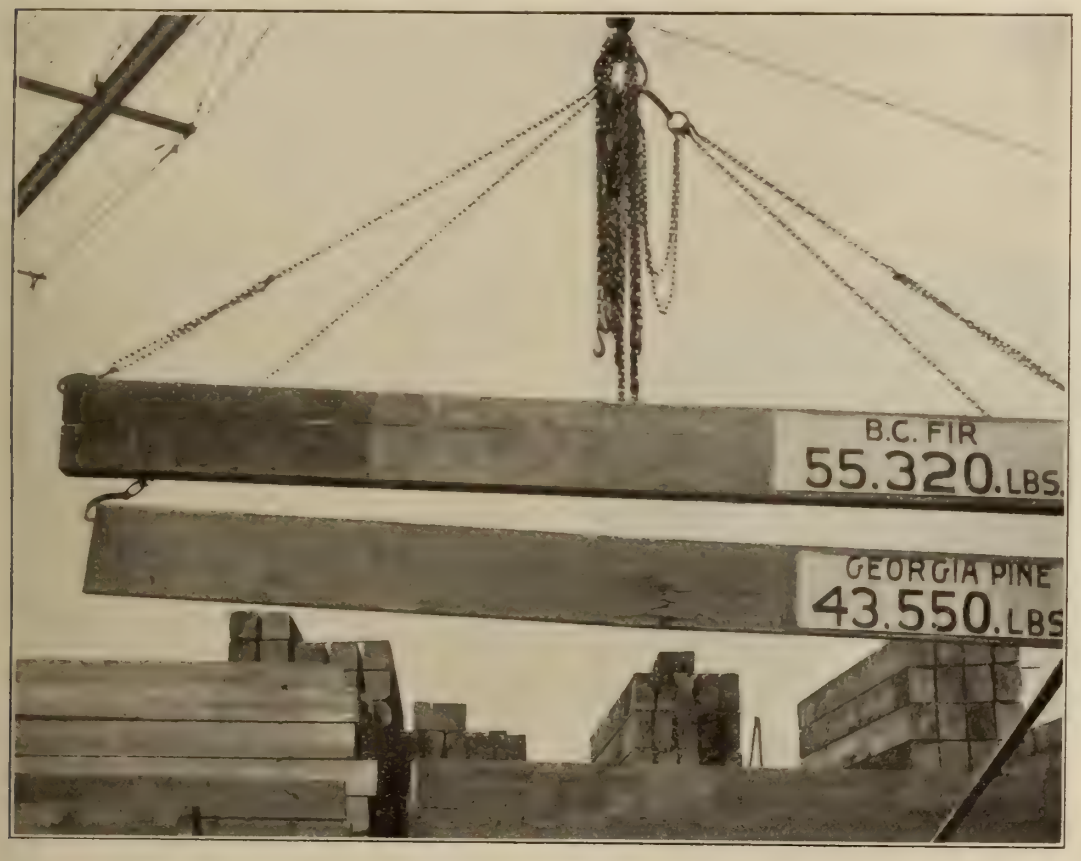
A similar statement from the Canadian Northern would be welcome, but there is reason to believe that the management of this road was signally lacking in foresight in failing to provide adequate repair shops at Winnipeg, where fully a fourth of its engines now lie useless. As has been reiterated in the press again and again, it is not more lines that Western Canada requires, but more rolling stock. Reports of large annual increases in rolling stock are apt to be deceptive, unless one bears in mind the enormous losses to the railroads of cars and locomotives from wreckage and wear and tear.

Admitted that the railroads have had a season of unparalled difficulty, we expect that they will profit by the lesson and endeavor to provide for the future such satisfactory service as the public have a right to expect. The fortunes of the West are largely at their mercy and, to a great degree also, those of Eastern Canada.

D. Ackland & Sons, lumber dealers, Winnipeg, Man., have commenced the erection of a two-storey brick warehouse, 124 x 52 feet, on the site of their present yards on Higgins avenue south.

Comparative Transverse Test of B. C. Douglas Fir and Georgia Pine

Whether Douglas fir or Georgia pine is the better weight carrying material for factory and mill construction was definitely decided a few days ago by a test carried out at the School of Practical Science, Toronto, by the Boake Manufacturing Company, of Toronto. For some time past discrimination has been made against Douglas fir in favor of Georgia pine by the City Architect where heavy construction timbers were required, a discrimination which contractors generally considered unfair and based on unreliable statistics. These latter were said to be the results of tests held at the School of Science, and hence indisputable. So convinced, however, were Mr. Boake and many of the city lumbermen that Douglas fir was greatly the superior of Georgia pine that it was decided to settle the matter once and for all, so far as Toronto is concerned. Accordingly, two beams of these materials, of the same dimensions, each about 19 feet by 19 3-4 inches by 8 inches, were placed in the testing machine at the School of Science, with the 19 3-4 inch edge vertical, the end supports being set 18 feet apart. The load was then applied at the centres of the beams.



Beams of British Columbia Fir and Georgia Pine Tested at the School of Practical Science, Toronto, Showing Breaking Points.

When loads up to 55,320 pounds had been applied, the fir, which, beyond a steadily increasing tendency to bow, had as yet shown no sign of breaking, cracked partially lengthwise, the upper section projecting half an inch beyond the lower. Still it remained steady, and to all appearances would have easily supported an even greater load. The Georgia pine failed absolutely under a load of 43,550 pounds by breaking in the centre immediately under the weight, not longitudinally only, but transversly as well.

The result of the test goes to show that Douglas fir for heavy construction work will not only support a greater weight than Georgia pine, but, even when pressed to the breaking point, will not snap off, but merely bend or crack in a longitudinal direction. The statement of the test, as forwarded to Mr. Boake by Professor Riddell, of the School of Practical Science, reads as follows:—

School of Practical Science,
Toronto, April 24th, 1907.

Boake Manufacturing Company, Limited,
307 Howland avenue, City.

Gentlemen:—

"I herewith submit report of transverse tests on two beams supplied by you, one of Douglas fir, the other of Georgia pine.

"The beams were about 19 feet long by 19 3-4 inches by 8 inches; they were placed in the testing machine with the 19 3-4 inch edge vertical, the end supports being set 18 feet apart, and the load being applied at the centre.

"The beam of Douglas fir failed under a load of 55,320 pounds, by shearing along the neutral axis, there being also slight indications of failure on the tension side. This ultimate load of 55,320 pounds corresponds to a shearing stress along the neutral axis of 263 pounds per square inch, or a fibre stress at the lowest point of the tension side of the beam of 5,744 pounds per square inch.

"The beam of Georgia pine failed under a load of 43,550 pounds, by breaking on the tension side

"This load of 43,550 pounds corresponds to a modulus of rupture in tension of 4,522 pounds per square inch."

Yours truly,
J. M. Riddell.

DOUGLAS FIR.

The United States Forest Service has decided that Douglas fir shall hereafter be called by that name when they have occasion to refer to it.

For years it has been going under different names: Yellow fir, red fir, Oregon pine, Douglas fir and Douglas spruce. The first cargo shippers starting in the territorial days, knew all the Northwest as Oregon. The word pine naturally was used following the name of the woods so commonly known in the East, so Oregon pine became firmly fixed to the cargo trade. In foreign countries and, in fact, in California, there are very many who still retain the name of Oregon pine. Government specialists say there is no difference between red fir and yellow fir. Practically speaking, they are identical in every way, excepting in the color. It is held by some that the color is regulated by the age; that the older the tree grows the lighter becomes the color. The Forest Service sent out inquiries to lumberman and others to ascertain their opinion as to what should be the name of this wood. The three names sent out were Douglas fir, yellow fir and Oregon pine. Over seventy per cent. of the answers were in favor of Douglas fir. Hereafter call it Douglas fir.

METHODS OF INCREASING DURABILITY OF WOOD.

A method for rendering lumber more durable, consisting of replacing the air in wood with a solution of beet sugar and removing the excess of water by a subsequent drying, has been perfected in England. It is claimed that the timber treated in this way is no longer porous, will not shrink or warp, and is stronger, heavier and more durable.

Salt water is specially good for logs or lumber. The mills on the sea coast say that it takes the place of decomposing matter in the wood, and acts as a sort of preservative after the moisture has been dried out, making ordinary lumber much more durable than it would be if just dried without a soaking in sea water.

You cannot catch old birds with chaff, and you cannot get the most inquiries with a stale advertisement. No salesman would think of going to a customer time and time again with the same argument, the same old lingo each time. And yet how frequently it is that firms which are alert to every opportunity in other things are utterly indifferent to the wording of their advertisements or the antiquity of the argument in them. Very often the same old ad appears week after week, month after month, with never an indication in it that the firm is still doing business. Spruce up your advertisements, let the reading public see that you are in business to get business.

WESTERN CANADA

Western Offices of The Canada Lumberman,
615 Hastings Street, VANCOUVER, B. C.; 720-721 Union Bank Building, WINNIPEG, MAN.

THE MODERN MILL OF THE REVELSTOKE SAWMILLS COMPANY.

Among the many new mills that have recently come into existence in the Mountains of British Columbia is that of the Revelstoke Sawmills Company, Limited, which is the peer of any.

The Revelstoke Lumber Company was formed about six years ago at Revelstoke, B.C., a large frame mill building, with circular saw equipment and a daily capacity of 40,000 feet, being constructed by that company at "The Big Eddy," about two miles from Revelstoke, the main line of the Canadian Pacific Railway passing direct through the company's yards. This plant was operated continuously until its destruction by fire on July 11th, 1905.

MILLS OF THE REVELSTOKE SAWMILLS COMPANY, REVELSTOKE, B. C.

As soon as all fire insurance claims, etc., had been adjusted, the company took steps for the immediate rebuilding of the plant. At the same time the whole company was reorganized, assuming the name of the Revelstoke Sawmills Company, Limited, and being capitalized at $500,000.

Mr. C. F. Lindmark, of Revelstoke, became president and general manager; Mr. R. Davis, of Revelstoke, vice-president, and Mr. A. E. Jessop, of Revelstoke, secretary-treasurer.

The new company took over all the assets and liabilities of the old company, and the work of rebuilding the mill was commenced in November, and by the middle of April, 1906, the new mill began cutting lumber.

The main mill building, which is three stories high, is L shaped, one part being the saw mill and the other the planing mill. The saw mill part is 50 x 132 feet, and the planing mill 85 x 100 feet. Above the saw mill is the filing room, while over the planing mill is the planer machinery fitting room.

The saw mill contains an 8-foot double-cutting band mill, 14 inches wide, of Waterous manufacture, gunshot feed carriage with set work, steam niggers, kickers and loaders. It also contains a band re-saw, a 6-saw Waterous edger, with automatic trimmers and complete set of live rolls and transfer chains.

A unique feature of the transfer chain system is the method of carrying the lumber from the trimmer to the sorting table, which is situated at right angles to the trimmer. To do this it is necessary for the lumber to go "around the corner." This is accomplished by a slow running chain on the inside and a faster moving chain on the outside. The lumber drops several inches in two different places, which drop is designed to give clearance, so that the inner end of a board, while accomplishing the turn, will not come in contact with the preceding or following board, thereby causing a jam. This obviates the necessity of having a man stand at the turn to release the boards. The saw mill also contains the necessary complement of slash and slab saws, and carrier chains, conveying the slabs and refuse to the slab pile and burner respectively, a cable with inch discs being placed about four feet apart from the carrier chain, this being superior to the old-fashioned carrier chain with wooden block attached, commonly used in mills.

This carrier extends over 400 feet from the main building to the burner, which is situated on the other side of a projected cliff, thereby insuring absolute safety from fire. A slight hollow has been blasted out to complete what was already an almost perfect burner of nature's own providing. The mill pond is also a natural one, being formed by a bay-shaped eddy in the Columbia river, and into this the jack-ladder descends.

The planing mill contains three large planers and one large moulder of MacGregor-Gourlay manufacture. These planers are of the latest design in style and equipment. The planing mill also contains one circular re-saw for bevel siding; circular rip saw and band saw, corner block machines, lathes, etc.

The filing room contains a complete set of filing machinery, supplied by A. J. Burton, Vancouver. All the saws in use at the mill are supplied by Messrs. Burton and are giving good satisfaction.

The boiler house is built separate from the main building, and is absolutely fireproof, having brick walls, iron roof, cement floors and iron doors. It contains four Waterous boilers, giving a total of 350 horse-power. The power equipment includes two Waterous engines, each 18 x 24 inches, coupled together, which run the saw and planing mill. The filing room, machine shop and electric light dynamo each have their own engines, of smaller horse-power. The plant is lighted by a Canadian General Electric 700-light dynamo, driven by a McEwen engine.

The machine shop is separate, being situated across the main line of the C. P. R., and contains lathes, planers, shapers, trimmers, power-hack saw, drill, etc., while in the rear is a well-equipped blacksmith shop.

The yard and piling ground covers an area of 30 acres in all. Extending throughout the yards are elevated tramways with shorter cross-tramways and turntables at intersecting points. The yards are well supplied with transfer cars, dumping jacks and push cars.

A complete gravity system of waterworks has been installed at the plant. The water is contained in a large reservoir dam, and is conveyed throughout the mill buildings and yards in six and four inch mains. Hydrants and hose reels are located at convenient places, being easily available in event of fire. In consequence of their excellent water system, the insurance rates on this mill are reduced to a minimum, being perhaps the lowest of any mill in the province.

The Kitchener Lumber Company, of Kitchener, B.C., recently ordered from the Robb Engineering Company one 100 horse-power Robb-Armstrong slide valve engine, one 100 horse-power Robb-Mumford-Brady portable boiler, rotary mill, gang edger, etc.

THE LUMBER SITUATION IN BRITISH COLUMBIA.

The following statement as to the lumber situation in British Columbia was read before the Parliamentary Committee at Ottawa last month by Mr. Peter Lund, manager of the Crow's Nest Pass Lumber Company:

In order that we may fully understand the present situation, it will be necessary to have a brief outline of the conditions as they existed from the days of the construction of the Crow's Nest Pass Railway up to the present time.

Immediately after the construction of this railway a number of small portable mills were erected for the purpose of supplying construction material and supplying lumber for local requirements. These mills were usually placed in the most desirable timbered districts and where lumber could be produced at a minimum cost.

When the railway had been completed and the local requirements for the small town that has sprung into existence incident to the construction of this railway had been supplied, these lumbermen were compelled to look for other markets. Their natural market was the Northwest Territory and Manitoba, the former now Alberta and Saskatchewan. The Americans were at that time supplying a large portion of the requirements in these districts, there having been previous to this period large bush fires in the State of Minnesota, immediately south and east of the Province of Manitoba. The timber remaining on this burnt area was considered unfit for ordinary mechantable lumber. It being found, however, that a large quantity of cheap lumber was required in the Northwest, a number of portable mills were erected for the purpose of cutting this timber, which found a ready market in Manitoba and the Northwest Territories, at a lower price than that prevailing at that time in American markets and also in the markets of Western Canada, for ordinary merchantable lumber. These conditions were the means of at that time establishing lower prices on lumber in Manitoba and the Northwest Territories of Canada than could be produced under ordinary conditions.

The lumbermen of Southern British Columbia, referred to above, were compelled at that time to meet the prices then existing in the localities mentioned in order to dispose of their product. This condition established at that time prices that were actually below the cost of production even under the favorable conditions existing at that time. As the settlement in the Northwest increased there naturally became a corresponding increase in the demand for lumber. Timber at that time was available within easy reach of the railway, the number of mills gradually increased. It was found, however, that the prices obtained by the manufacturer of lumber in the interior of British Columbia was not sufficient to meet the cost of production. Efforts were made from time to time by the manufacturers to obtain higher prices, it being impossible, however, to convince the dealers of the necessity of paying prices for lumber other than those prevailing at that time. The condition of the manufacturer became desperate, there being no money made in the lumber business, the banks refused to make the necessary advances enabling the manufacturer to continue and to increase his ouput to correspond with the steadily increasing demand for lumber caused by the increased number of settlers locating in the Northwest.

During this period an association of the retail lumbermen of Manitoba and the Northwest Territories was formed, called The Western Retail Lumbermen's Association, with headquarters at Winnipeg, one of the objects of this association being to prevent too many dealers or lumber yards being established at the different points where in their opinion there was not sufficient business to justify additional yards being established, and to confine the retail trade, if possible, to the members of the association. The manufacturers of lumber of British Columbia, and also those in the district east and north of Winnipeg, were admitted to the association as honorary members. These manufacturers were expected under this arrangement to confine their sales to members of the Western Retail Lumbermen's Association. The lumber manufacturer of British Columbia continued to sell his lumber at less than actual cost, in fact, the millmen were compelled to sell in order to operate, regardless of price, there being at that time no uniformity in the wholesale price of lumber. It also became evident to the manufacturers and also to the officials of the Canadian Pacific Railway, that the dealers at points where there was not opposition were enabled under the arrangements mentioned to obtain any price for lumber that they might desire without any prospects of increase in price to the manufacturer. These conditions resulted, at a joint meeting of the manufacturers and dealers, which was held in Winnipeg, to the best of my recollection, in February, 1903. Mr. William White, then manager of the western line of the Canadian Pacific Railway, with headquarters at Winnipeg, issued an ultimatum to the lumbermen stating that unless prices of lumber were regulated and placed on a more equitable basis to the consumer, that the Canadian Pacific Railway Company, owning large quantities of standing timber in British Columbia, would erect sawmills and undertake to distribute lumber at the different points on their railway in Manitoba and the Northwest at cost. In a discussion with Mr. White by the manufacturers, it was thoroughly demonstrated to the railway company that the prices obtained by the manufacturers were not excessive. It was agreed, however, for the purposes of conciliation, that the railway company should reduce the then existing freight rate between a point near Moose Jaw, Sask., and Winnipeg, Man., to the extent of 50 cents per thousand on lumber shipped into that district, and in consideration of this reduction being made by the railway the manufacturers agreed to make a similar reduction in their then existing price list. I wish to point out that the manufacturers' price list of the wholesale prices of lumber listed at that time being sufficiently high to allow the producer of lumber a fair profit. Up to this time, however, the price list or lists have been absolutely inoperative, it having been found impossible to obtain or maintain a uniform wholesale price, which resulted in many mills going into liquidation and being forced out of business.

At a joint meeting in Winnipeg, above referred to, the manufacturers decided to withdraw their honorary membership from the Western Retail Lumbermen's Association, it being their intention to form a manufacturers' association of the dealers, for the purpose of obtaining reasonable prices for their material and for the purpose of placing their industry on a more staple and satisfactory basis. The manufacturers in the interior of British Columbia were found, however, to be in such deplorable financial condition and involved and demoralized to such an extent that, while several attempts were made to organize and to establish and maintain fair and uniform prices, these attempts were made with failure to accomplish any satisfactory results. It was not until some time in 1905, at a meeting held by the manufacturers in the town of Revelstoke, B.C., where it was decided to form an association confined strictly to the manufacturers of lumber in the interior of British Columbia, for the purpose of placing their industry on a more satisfactory and solid basis. At this meeting Mr. George P. Wells was appointed to take charge of the association, and act as secretary and treasurer. A meeting was called a little later, where a price list governing the selling price of lumber by the different mills located in the district covered by the association, the same being called the Mountain Lumber Manufacturers' Association of British Columbia.

From this time on the wholesale prices of lumber became more staple. The association assisted the smaller mills in marketing their product at the same price that was realized by the larger manufacturer; in other words, the mills were no longer dictated to by the retail trade, whether large or small. The price asked by the manufacturer at that time was considered satisfactory, and in the opinion of the association or the members thereof was sufficient to allow them a reasonable profit on their business. It was soon found, however, that the timber tributry to the mills and the railway was rapidly being exhausted. That which was not cut and manufactured into lumber was being destroyed by bush fires, some being set by the locomotives from the railway and others caused by prospectors, campers, fishermen, etc. These fires, running through the districts where logging operations had been conducted and where railway ties had been cut, for a number of years, caused great damage and destruction, and practically denuded the district within ordinary access from the railway of all merchantable timber. In other words, the manufacturer found himself invariably with a partly worn-out sawmill and without a supply of standing timber in the face of a very rapidly increasing demand for lumber in their natural markets, namely, Alberta, Saskatchewan and Manitoba.

Under these conditions it became absolutely necessary to reorganize the industry, with a view of operating upon a much larger and a more permanent scale. It became necessary to invade the isolated districts along the main rivers and their tributaries for the purpose of obtaining a supply of logs. Waggon roads had to be built many miles into the interior for the purpose of transporting supplies to the different logging camps at great expense; in many cases these waggon roads cost as much per mile as the average railway in Manitoba and the Northwest Territories. It then became necessary to improve the rivers and the tributary mountain streams, so that logs could be driven in them to the respective mills. Hundreds of thousands of dollars have been invested in these improvements during the last three years. In order to justify this great expenditure of money it became absolutely necessary to erect larger mills, heavier and more modern equipment, a great proportion of this new machinery having to be brought from the United States, upon which a duty was charged from 20 per cent. to 35 per cent., thus enhancing the cost of the mills to a much greater extent than the cost to our neighbor lumbermen across the border. In the meantime, nearly every item used in connection with the manufacture of lumber has increased in price to a much greater extent than the corresponding increase in the price of lumber. For instance, in 1898 and 1903, railway ties were obtained by the railway company delivered on their right of way in the Crow's Nest Pass district at 16 cents each; at present the railway company are paying from 30 to 35 cents per tie, notwithstanding the fact that the railway company are the owners of nearly two-thirds of the timber area of this district. In 1900 to 1903, the coal mines were obtaining their mining timbers at one cent per lineal foot. To-day they are paying for similar sizes and quality 3 cents per foot, notwithstanding the fact that the coal companies, especially the Crow's Nest Pass Coal Company, Limited, own thousands of acres covered with timber suitable for these purposes. In 1903 horses were obtained readily in Alberta at from $100 to $125 each. In 1906 horses suitable for logging purposes were very difficult to obtain at from $225 to $250. From 1900 to 1903 timothy hay was obtained at Pincher Creek, Alberta, at from $8.00 to $10.00 per ton. In 1904 we paid $12.00 per ton. In 1905 $14.00. In 1906 $16.00.

Band saws being a very heavy item in connection with the manufacturing of lumber, and is subject to a duty of 30 per cent. This was overcome in the past by shipping in blank saw blades from the United States free of duty, enabling the mill by installing the necessary material to manufacture and fit up their own saws, hence this duty has been placed on saw blanks by the Dominion Government. The cost of production in the lumber output of the interior of British Columbia has been increased to the extent of approximately $50,000 per annum. Common labor, such as lumber pilers, teamsters, loggers and loaders, were paid in 1900 to 1903 $30.00 per month and board. This class of men are now being paid from $45.00 to $55.00 per month and board, and only about one-half the necessary supply available at any price. Large quantities of logs have been left in the woods, the present season, owing to the absolute inability of the lumbermen in procuring the necessary help.

Band saw filers are now obtaining $10.00 per day.

Prior to 1904 these positions were filled at from $6.00 to $7.00 per day. Sawyers are now obtaining $7.00 and $8.00 per day. Prior to 1904 they were paid $5.00 and $6.00 per day. All other skilled help has increased in price or a like proportion. Mill superintendents that were paid $125 per month in 1904 are now obtaining $200 per month. The salaries of cooks have increased from $60.00 per month in 1904 to $90.00 and $100 per month in 1906, and are very scarce indeed at that figure. Not infrequently whole camps are at a standstill on account of a cook leaving his post and another not being available. Large numbers of horses are frequently idle consuming feed, and must otherwise be cared for on account of teamsters not being available.

The supply of standing timber in the interior of British Columbia has been greatly overestimated and exaggerated, as only about 12 per cent. of the area east of the Cascade Mountains contained merchantable timber. A considerable portion of this can only be logged at a cost practically prohibitive.

Lack of absolute transportation facilities is also the means of greatly enhancing the cost of the production of lumber. The lumbermen have erected at a great expense planing mills equipped with the most modern machinery and manned with the most skilled labor obtainable.

The car supply is such that these plants can only be operated a portion of the time. The lumbermen dare not discharge these men; if they did, when a few cars were available they would not be in a position to load them. One mill alone on the Crow's Nest Pass branch of the Canadian Pacific Railway had on hand on December 1st, 1906, 700 cars of lumber ready for shipment. The railway company was notified that this lumber should be moved during the winter months, and up to the present date only about 100 cars has been lifted. All this time a crew of men have been held by the mill company for the purpose of handling and loading this material. The dealer, building contractor and consumer are now clamoring for material. I consider that owing to the scarcity of railway cars and the lack of transportation facilities alone, the cost of lumber delivered in Alberta, Saskatchewan and Manitoba has been increased at least $1.00 per thousand, and among the mountain mills alone the increase from this cause during 1906 has been over $250,000, notwithstanding this fact that the railways are doing their utmost to relieve the situation.

As the supply of standing timber decreases, lumber must necessarily become correspondingly higher in price under the most normal conditions.

Lumber on our great western prairies must necessarily be high, even though the conditions of trade be absolutely normal, notwithstanding the fact that this product is now being hauled by the railway companies at the exceedingly low rate of approximately three-quarters of one cent per ton per mile. As the lumberman continues his operation the value of his property must steadily decrease, as he has only one crop of timber to harvest, which is continually in great danger of being destroyed by fire; while he is operating his plant the same is gradually wearing out and growing more and more out of date. On the other hand, the farm lands on the prairie, which have been donated to the farmer of Alberta, Saskatchewan and Manitoba, have steadily increased in value, so much so, in fact, that in ten years' time these lands have increased form the price of a homestead to $30 or $40 per acre. On these lands a crop of wheat can be raised annually. The value of the average wheat crop on our western prairie is very nearly equal to the one only crop of timber available by the lumbermen from the timbered area of the interior of British Columbia.

What Western Canada now requires is approximately 10,000 men who are willing to do a fair day's work in connection with the production of lumber and in the construction of railways at a fair and reasonable rate of wages. And unless these are supplied forthwith there can be nothing to prevent the cost of lumber from steadily increasing, or to prevent transportation facilities in the movement of lumber, coal and grain, becoming forthwith demoralized and inadequate.

Under a condition where one-quarter of a million people are annually settling in our great Canadian west, where fuel and shelter is so essential to the happiness and welfare of the settler, and where his very existence must depend upon the woodsmen, who must climb the Rocky Mountain side of British Columbia and labor and wade to his waist in the icy waters of its mountain streams, in order to make life possible for the farmer. The coal miner, who must labor in darkness and in the poisonous gases and other dangers coicident to the production of coal in order that the settler and farmer might keep from freezing, and the trainmen, who night and day are laboring and endangering their lives in order that the products so essential to the comfort and happiness of the settlers in our great prairie province may be available. It is unbecoming of our prairie friends and it is not in common with our great western spirit to complain where values of lands and lots and of other property double in value each year, and where every man, woman and child may become independent with but a meagre effort. This enquiry is, under the circumstances, absolutely uncalled for and unnecessary. That which is necessary is to forget that we are politicians, forget that we are farmers, lumbermen and coal miners, and remember always that it is incumbent upon us to be men with one common object to develop Canada, to be Canadians, and not to live in a house divided against itself.

RIGHTS UNDER A TIMBER LEASE.

William Brohm, a farmer of Brackendale, lost his case against the British Columbia Mills, Timber & Trading Company, of Vancouver, in which he sought an injunction to restrain the defendant company from entering upon his land for the purpose of cutting timber. The plaintiff also sought to have the court declare him the owner in fee of the land.

It was set forth by the plaintiff that he had come into possession of the land in question by right of a pre-emption record and a Crown grant. The plaintiff objected to threats of the defendant company that it would go on the land and cut off the timber.

The defence was that the pre-emption record and Crown yrant of the plaintiff in no manner overcame the rights of the defendant company to the timber on the land, which is held by virtue of a timber lease granted to it prior to the time of the issue of the pre-emption record or the Crown grant to the plaintiff.

The action was dismissed with costs.

MACK LUMBER COMPANY.

The Mack Lumber Company, recently organized in Winnipeg, has opened up an office in Vancouver, B.C., the address being 658 Granville street This office is in charge of Mr. R. L. Scott, who was formerly in charge of the sales department of the Foss Lumber Company in Winnipeg, which position he resigned to accept his present one.

The Mack Lumber Company's head office is now in the Aikens Block, Winnipeg. Mr. C. J. McCollum, formerly vice-president of the First National Bank at Hallett, Minn., is the president, while the general manager is Mr. P. C. McGillivray, who since the death of Mr. Foss has been general manager of the company of that name.

A 40 x 100 feet dry kiln is to be constructed by them this winter.

The plant has its own cook house and cabins for the unmarried men, also a number of residences for the married men.

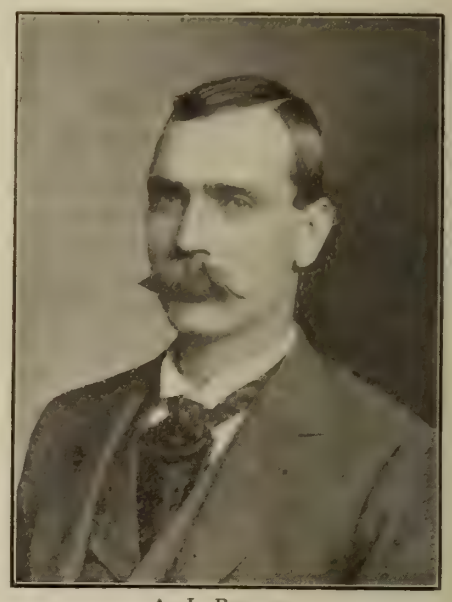
The operation of the mill is carried on under the personal direction of Mr. Lindmark, Mr. Stewart, ably assisting him as superintendent at the mill.

Mr. W. J. Elliott is foreman of the planing mill, Mr. J. Anderson being the engineer and electrician, and Mr. C. Rasmuson the head filer. The total capacity of the mill is eighty thousand feet per day of ten hours.

The limits, which are adjacent to the mill, consist of about 50 square miles, all on the Columbia river, with an estimated yield of five hundred million feet of timber. This comprises sixty per cent. cedar, the balance being fir, spruce and hemlock.

THE A. J. BURTON SAW COMPANY.

Mr. A. J. Burton, whose portrait is shown herewith, has been connected with the saw manufacturing buisness all his life. After a wide and varied experience in this business, in several parts of Canada and



A. J. BURTON,
General Manager of the A. J. Burton Saw Company, Limited, Vancouver, B.C.

the United States, he organized in Vancouver, B.C., the Saw Manufacturing Company which bears his name, and of which he is the manager. Ever since its formation, about three years ago, The A. J. Burton Saw Company has steadily increased in volume of business and quality of ouput. The capacity of the

GEO. J. PALMER,
Secretary-Treasurer of the A. J. Burton Saw Company, Limited.

plant has been added to several times since it was started, both by the erection of additional buildings and by the installation of additional and up-to-date machinery from time to time, until the plant has now reached a position where it can handle orders of any size or description for saws and filing room supplies.

Associated with Mr. Burton in the active management of the business is another member of the company, Mr. Geo. J. Palmer, who has filled the position of secretary-treasurer ever since the formation of the company.

VIEWS AND INTERVIEWS

"Hemlock was until recently a much abused lumber," was the remark of a Toronto dealer the other day. "It is only now," he continued, "that it is getting fair play, and I am glad to see it. The carpenters discouraged its use because it could not be worked with as much ease as pine, but that is no reason why it is not equally satisfactory for certain purposes. Many people make the mistake of trying to use hemlock before it is properly seasoned, and in this respect it is no different from any other wood. Given fair treatment, though, it will show to good advantage."

* * *

The Canada Lumberman and Woodworker received a pleasant call recently from Mr. R. H. Kay, of the E. B Foss Company, Bay City, Mich. It will be remembered that this company's tender was accepted by the Ontario Government for the recently advertised timber limits in the Algoma district. The opinion seems to prevail amongst Ontario lumbermen that the Foss Company paid an extremely high figure for this timber, but we understand that other Michigan firms tendered very close to the same figure. The Foss Company are operating at Thessalon, Ont., under the name of the Hope Lumber Company, and are having their lumber manufactured under contract by Mr. George L. Burtis and the E. B. Eddy Company. They ship entirely by water, and are considering the advisability of purchasing a site for a lumber yard at Tonawanda. If this step is taken, they will remove their entire business, including their planing mills, from Bay City to Tonawanda.

* * *

A gentleman who knows the early days of the lumber industry is Mr. H. Ellsmore. He has watched the white pine of Michigan gradually reach the point of almost complete extinction, and is now watching with equal interest the decadence of the white pine of Ontario. Mr. Ellsmore relates that thirty years ago he frequently sat in the Board of Trade rooms in Saginaw and listened to lumbermen boasting of the inexhaustible supply of the timber of Michigan. If anyone had suggested coming over to the Georgian Bay to buy timber, a medical examination as to his sanity would have been considered necessary. To-day the pine timber of Michigan is a thing of the past, and Mr. Ellsmore predicts that less than ten years will exhaust the supply in Ontario. He accordingly looks for no permanent decline in the price of lumber. "There is really no substitute for many purposes," he reasons. "A large amount of money has been expended by James J. Hill and others in experimenting with steel ties, but they are unsatisfactory, steel not being capable of expansion and contraction as is wood. The demand for paper, too, is rapidly on the increase. The New York World, for instance, consumes ten car loads of paper a day."

* * *

In many things custom establishes the law. This is especially true in the lumber business. The recent experience of a Toronto dealer illustrates, first, the wisdom of acquiring as much knowledge as possible regarding the particular calling in which one is engaged, and, secondly, that the brightest of men will sometimes find themselves handicapped by ignorance of conditions. The dealer in question is a thorough lumberman, but his experience in shingles had been confined to the product of Ontario and British Columbia. In these provinces the buyer of a thousand shingles gets a thousand shingles. Latterly, owing to the shingle scarcity, this dealer placed his order for a quantity of New Brunswick white cedars, which he sold to a Toronto customer. New Brunswick shingles are short-count, this being the custom of the trade, the shortage varying between ten and twenty shingles in a thousand. The buyer therefore charged the shortage back to the dealer, who had to make good the difference. The dealer had no redress, inasmuch as he had bought in a short-count market and sold in a full-count market. How the custom of furnishing less than the full number for a thousand shingles originated, we cannot say. Perhaps some of our readers can tell us.

STAVE MILL ECONOMIES.

First of all, I desire to make it plain that in the absence of any organized plan of campaign in behalf of the barrel, the next best thing that occurs to me is the practice of such economies in the manufacture of not only staves but also heading and hoops as will offset the ever-advancing cost of timber and enable us to keep the barrel at such a price level as will assure its continued use in something like its present volume.

I presume that every manufacturer practices such economies as he knows, but it is not given to each to know of all economies and savings that are developed, and if in the course of these remarks I can suggest one thing that will strike you as being practical at your plant and so permit you to reduce the cost of your stock, I shall feel that the time you have given me is not wholly wasted.

In the Journal of November appeared a description of a very large stave plant, which is operated by the Brooklyn Cooperage Company, where economy has reached such a standard of completeness as to make it scientific. I stayed at the plant a week, during which time I was over it, under it, on top of it and through it from end to end so many times and was so observant of everything, that I do not believe that anything in the way of expense and labor-saving devices or practices escaped me.

The first thing that struck me was the use which was made of equilibrium, it being the evident purpose all through to make the weight of the load do its full share of the work, and so lighten the labor of the men and make a less number of them necessary. Following this plan, I saw one man with a cant hook unload a car of logs in a few minutes. In fact, he unloaded a whole train of cars while I was looking at him, and the logs of their own volition went tumbling into the pond. This was made possible by building the track on a slant, so that when the car stops at the pond the sides of the car were knocked away and the cars unloaded themselves. This feature may not be new, but it is certainly very effective. This same principle was followed in the arrangement of the stave tunnels, where the tracks were on an incline and the tunnel doors hung on balance, so that only one man was needed to fill and empty the twenty-one tunnels and keep the cutters supplied with bolts.

The next place where I noticed the equilibrium feature was in the stave barrows. I asked who supplied them. The answer was: "We make them ourselves, because we cannot get the kind we want." These are designed so that they balance forward and back whether loaded or empty, and as lifting load is avoided it only requires the man to push forward. In that way he can carry at least a half more on the load, which makes quite a saving. Now, that may seem a small thing, but it helps to bring cost of production down to the almost unbelievable figure which was shown me and which I will speak of later.

Another strong feature of economy which I noted all through the plant was the high productive capacity of every machine. The care of the machines, which was carefully observed, assured the highest efficiency at all times, and so I noticed the cutters doing 60,000 per day—not for one show day, but every day, and I presume the average production of a stave cutting machine, taking plants as they run, is not much above 40,000 staves per day. I know I have been told by members of this association that 35,000 staves was all that any cutter ought to do daily. Now, if these cutters are made to do 60,000 per day, it is not hard to see how the saving in cost is 50 per cent. on that part of the work over plants where 35,000 or 40,000 is called a day's work.

Furthermore, where the cutters are run up to such an enormous capacity, it compels a similar efficiency all along the line. The log sawyers, the bolters, the steam tunnels, the cullers, the carriers, the pilers, must all keep step with the pace set by the cutters, and so the saving follows all the way through.

The next surprising feature that came to my notice was that from 90 to 95 per cent. of No. 1's was secured from beech, birch and maple logs. This is accomplished largely by culling the logs at the log deck, so that logs or portions of logs not suitable for staves go to the heading saws. In fact, that is all the heading outfit is there for. The plant is primarily and wholly a stave plant, but through the methods employed about 3,500 sets of heading are produced daily from logs or bolts that would not make good staves.

Other economies practiced at this plant are as follows: The ashes are all saved, sifted and sold for fertilizer. The slabs and larger cuttings are sold to a nearby alcohol plant. The waste wood suitable for firewood is sold in the village and to the employees, and the rest, with the sawdust, goes to the furnaces and produces all the heat and power required. There are no loose ends seen anywhere; no slabs, leshings or pieces of any kind are seen lying about. Everything is picked up, cleaned and used. From these combined sources more than $1,000 per month is realized, which is a pretty tidy sum to go up against the expense bill, and it explains in a large measure the figure of close to 90 cents per thousand, exclusive of jointing, as the labor cost of staves produced at this mill.

CANADA'S COMMERCIAL AGENCIES

The extent to which Canada's foreign trade has been built up through the work of the several commercial agencies established by the Dominion Government is probably not fully appreciated, even by the business men of the country. In recent years, when our manufacturers have been busily engaged on domestic orders, the foreign trade of Canada has continued to show expansion, and the credit for this is due in no small degree to the Commercial Agency Service.

The first commercial agents were appointed in 1892, and were located in the British West Indies. The following is a list of the present agents, with location and year of appointment:

Name and Location.	Year of Appointment.
Burke, G. E., Jamaica, B.W.I.	1892
Horsford, S. L., St. Kitts, B.W.I.	1892
Tripp, Edgar, Trinidad, B.W.I.	1892
Sontum, C. E., Christiania, Norway.	1893
Larke, J. S., Sydney, Australia	1894
Bryson, R., Antigua, B.W.I.	1896
Poindron, A. F. A., Paris, France.	1902
Ball, P. B., Birmingham, Eng.	1903
Jaekson, J. B., Leeds and Hull, Eng.	1903
MacNamara, P. B., Manchester, Eng.	1903
Ross, D. H., Melbourne, Australia.	1903
MacLean, Alex., Yokohama, Japan.	1904
MacKinnon, W. A., Bristol, Eng.	1904
Arnaud, E. D., St. John's, Nfld.	1905
Donly, A. W., Mexico, Mex.	1905
Craig, H. G., Shanghai, China	1906
Preston, W. T. R., China, Japan and Korea	1906
Chesley, John A., Cape Town, South Africa	1907

It will be seen that the number of commercial agents has been increased to eighteen.

Three years ago, Mr. F. C. T. O'Hara was appointed Superintendent of the Commercial Agencies Branch of the Department of Trade and Commerce, which appointment marked the inauguration of several important changes calculated to improve the efficiency of the service. In previous years the reports of commercial agents were published only in the Monthly Report of the Department, which considerably delayed the publication and distribution of this valuable commercial knowledge, thereby seriously impairing its usefulness. To obviate this the issue of a weekly report was begun, containing not only the reports of the commercial agents, but all trade inquiries and extracts from commercial papers, and tariff changes and new customs regulations of Canada and foreign countries when of immediate importance to the Canadian business men. All this commercial information is now distributed every week.

With each weekly report lists of trade inquiries from the commercial agents and from other sources are published. A complete index of these inquiries is also kept up to date. It has therefore become possible to immediately furnish anyone with the name and address of every inquirer from abroad concerning any one commodity or subject of trade inquiry. The remarkable increase in the number of trade inquiries received is shown by the following figures:

Year.	No.	Monthly Average.
1898	19	1.58
1899	167	13.91
1900	390	32.50
1901	319	26.58
1902	330	27.50
1903	470	39.16
1904	566	47.16
1905	819	68.25
1906	1.664	138.66

The following statement shows the number of addresses furnished in response to trade inquiries:

Year.	No.	Monthly Average.
1898	0	.....
1899	5	.....
1900	90	7.5
1901	79	6.58
1902	134	11.16
1903	151	12.58
1904	1,164	97.00
1905	2.985	248.75
1906	8.960	746.65

Mr. F. C. T. O'Hara, the energetic Superintendent of Commercial Agencies, is a native

MR. F. C. O'HARA,
Superintendent of Commercial Agencies of Canada.

of Chatham, Ont., where he was born thirty-six years ago. He was educated in the Public Schools and Collegiate Institute at that place, and after serving in the Chatham, Brantford, Windsor and Walkerville offices of the Canadian Bank of Commerce, extending over a period of four and a half years, he went on the reportorial staff of "The World," of Baltimore, Maryland, and a little later joined the staff of "The Morning Herald" of the same city, where he remained nearly four years. During that time he did reportorial work, was State editor, assistant city editor, and assistant night editor. In 1896 Mr. O'Hara was appointed private Secretary to Sir Richard Cartwright, Minister of Trade and Commerce, and in 1904, as already stated, was given charge of the commercial agencies. He has done splendid work for Canada. A letter was addressed by him to The London Times in December, 1905, suggesting to the Imperial authorities the wisdom of appointing agencies in the Dominion to promote British trade interests throughout the Canadian provinces, and within six months' time the British Government acted and sent Mr. R. Grigg out to Canada. Mr. Grigg has openly stated that he will recommend the appointment of certain British officials in Canada, as at present there is no direct official means of furnishing information to anyone in Great Britain who desires to obtain information as to the Canadian markets.

LEGAL DECISIONS AFFECTING THE LUMBER TRADE.

NO DUTY ON DEAL ENDS.

A claim for free entry into the United States of pieces of sawed wood known as "mill buttings" or "deal ends" was sustained by the Board of General Appraisers in a decision written by General Appraiser McCelland. The protest was mdae by F. W. Myers & Company, of Burlington, Vt., against the assessment of duty at 20 per cent. under paragraph 200. It was contended that the goods were entitled to free entry as paper stock, fit only to be converted into paper, or as pulpwood or firewood; or that they were dutiable at 10 per cent. under paragraph 463 as waste.

In the preparation of deals in Canada for the English market, it is the practice to cut them about three inches thick with square edges and from thirteen to fourteen feet in length. The logs from which these deals are cut, by reason of jamming in the river or over the falls, frequently become so damaged at the ends that when cut into deals they show imperfections. In order to perfect the deals, it is necessary to cut from the ends pieces ranging from six inches to three feet in length, and it is such imperfect ends which are known as mill buttings or deal ends. In Canada they are principally used at the mills for firewood, while the only purpose for which they have been imported into the United States and actually used is in the manufacture of pulp.

General Appraiser McCelland holds that there is nothing in the record to justify the collector's classification, while on the other hand the goods can not, strictly speaking, be classified as waste. As the only purpose, according to the evidence, for which these deal ends are employed in the United States is in the manufacture of paper. the Appraiser holds that they are entitled to free entry as pulpwood.

The entry of such merchandise free of duty has been sanctioned by the Government since 1892, or before the enactment of the present tariff law.

NEW SAW-SHARPENING MACHINE.

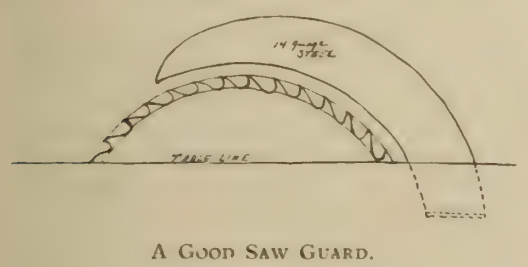
J. D. McAulay, Baddeck, N.S., has secured patents on a new saw-sharpeniny machine, comprising means for carrying the saw and actuating devices for moving the saw to bring the teeth successively into proper position to be sharpened.

A GOOD SAW GUARD.

That familiarity breeds contempt is well illustrated in the action of so many small saw-users, who resent anything in the way of a saw guard on the small saws. Though primarily designed to protect them from injury, they will take the risk of injured hands or lost fingers rather than submit to what they term "the trouble" of learning to saw with the guards on the machine. This is a rule in small and a good many large planing mills, but quite to the contrary in the box shops, where sawyers are getting more careful all the time. In fact, some of the saw guards are a radical departure from the former patterns, and one of them is illustrated herewith

It will be noted the guide comes well up over the saw, which, in the particular case noted, was 14 inches in diameter, and it also extends well past the centre of the saw, holding on the top the dust shield to keep the dust from striking the operator in the face.

Sometimes this dust shield is left off, a board suspended from the ceiling, with a bolted joint in it, just above the same, being substituted. One of the advantages claimed for this more troublesome form of dust shield is that it compels the tail boy to pass back his mis-cuts or edgings to one side of the saw, avoiding the chance of dropping anything in



A Good Saw Guard.

on the side of the saw, as it will be seen it is impossible to get anything on the top of the saw, even by the most clumsy tailer. The low shield, however, gives an unobstructed view of the table and the work, allowing of more accurate work; it is claimed by some of the sawyers faster work, also, as the sawyer can see clearly just what is going on ahead of him, and not run over the tailer with new shooks before he has a chance to get the last sawing out of the way. This often saves time in not making a "mix" when the tailer is passing off a shook to the bundler or truck, as the case may be.

No matter what the means of fastening to the table, each one of a half dozen men differing about it, the main idea is to do all the fastening from the under side of the table, leaving a clean plate where the saw comes through, allowing of a slight adjustment at the table line, as the saw may be worn out of line with the splitter. The splitter, as it is commonly called, can be forced either way without loosening the screws, if it is made of thin steel, preferably a piece of band saw plate. Saws of from 14 to 18 gauge make good guards, standing well the rough usage they are likely to get. It is not a difficult matter to make these handy little accessories to the safety of a man's fingers, and the form here shown is in use in more shops than any other the writer has noted. They combine the two most important elements around a saw table—strength and simplicity. Unlike the rather complicated affairs offered for this purpose, especially by foreign makers, this little tool is all in one piece, so small and thin as to be no impediment to a free watch on the work, yet as good for the purpose as any of the complicated ones, and really better, because of the absence of so many complicated parts.

But this guard will not do what some of the others will do. It will not keep your fingers off the saw if you make a slip. It will keep the work from catching on the tail of the saw, but it won't keep your hands off the front, if you are not skillful enough to know how to do the trick yourself This is an objection to them that would prohibit their use in some of the foreign countries, as they are essentially a guard. But the average skilled box sawyer doesn't want anything more than a splitter, as far as my observation goes. He doesn't want to be bothered with stuff over the top of the saw in front. He wants to see the point of cut, and he trusts to skill and luck to keep his "hands off."—Packages.

CANADA'S FOREST WEALTH.

The Hon. J. E. Langelier, of Quebec, recently addressed the Empire Club at Toronto on "The Forest Wealth of Canada." Mr. Langelier said that for twenty-five years he had given the subject earnest attention, and claimed to have some knowledge of what he spoke about. After giving a brief description of the localities of the timber-bearing lands of the Dominion, the speaker proceeded to give details of their extent.

According to the census of 1894, Canada had 1,348,798 square miles of timber lands, or more than 863 million acres. Dr. Robert Bell, in a recent report, says that Canada's forests stretch from Labrador to Alaska, a distance of 3,700 miles, with an average width of 700 miles, and covering an area of 2,590,000 square miles, equal to 1,657,600,000 square acres.

Canada possesses more than 800,000,000 acres of spruce and pulp wood, though some portion of this is unavailable through its inaccessibility. According to the last census, the United States of America have only 670,000,000 acres of land covered with timber, 20 per cent. less than we have.

The speaker than went on to quote statistics relating to the European timber limits, which, taken in the aggregate, are 20 per cent. less than those included in Canadian forests.

Our forests are practically inexhaustible, and we could afford to export annually sawn timber to the value of $60,000,000, and pulp wood to the value of $75,000,000, without any danger whatever of impoverishing our resources.

In the year 1900 the total forest wealth of the States of Michigan, Wisconsin and Minnesota was estimated at 32 billion feet, but since then the average annual cut has been about 6 1-4 billions; so those sources of supply are now fast becoming exhausted. After giving figures showing the acreage and values of various kinds of timber grown in the Dominion, the speaker said that under proper management, and with fair protection against fire, our forests are inexhaustible, even with an annual consumption of 30 billion feet. With a very critical analysis of the timber fields of the world, especially of the United States, Mr. Langelier concluded his remarks by expressing the opinion that on the exhaustion of the United States supply we will then have to face the demands of the European countries, to which the Americans ship a large portion of their forest products, and this will tend to increase the value of our own forest domains.

QUESTIONS ABOUT WHITE PINE GRADING.

(1) What should constitute a dead cull white pine board?

(2) Will a dead cull white pin board permit of a sound dry rot or red lumber throughout the board, provided the said board is sufficiently sound to hold nails at any point and could be used as a sheeting board?

(3) Is a dead cull board sold by any of the trade for box manufacturing purposes, and if so could this grade (provided it did not contain anything better throughout than dead culls) be recommended for such purposes, especially on a long freight haul?

Send us your opinion for the next number of The Canada Lumberman and Woodworker.

TIMBER CONSUMPTION.

Timber consumption in the United States now amounts to about 400 feet, board measure, per capita, while in Europe the average is but 60 feet. The best managed German forest grows on an average about 50 cubic feet of wood per acre annually. If American forests grew as well, which they do not, they would barely furnish by their annual growth the amount of wood now used. In Europe the amount of timber required for many structures is very much less than it is in the United States, masonry of one form or another generally taking its place. The time will come very soon in this country when the relative cost of masonry and wood will be much different from what it is now, and in consequence the use of timber will be restricted far below the limit of the present time. Methods of preserving timber will be employed far more extensively than to-day for many purposes where untreated wood is now used. One particularly useful improvement will be the substitution of woods which are now considered inferior for those of high value. An example of this is the gradual substitution in waggon boxes in place of white pine, first of yellow poplar, then cottonwood, then red gum, and to-day tupelo.—The foregoing facts and figures are taken from a paper recently read by Mr. R. S. Kellogg, before the Western Society of Engineers.

THE Wood-Worker and Retailer

USE OF BIRCH FOR INTERIOR FINISH.

By H. A. Callahan.

In the writer's opinion birch, in its uses for decorative purposes, has never had its due. It has not been maligned—simply misunderstood. Birch is versatile. That, perhaps, is its weak as well as its strong point. Many a man of multifold talent goes through life engaging first in one pursuit and then another, without gaining a real opportunity. He is called versatile by his friends. That is the reason for his failure. Thus it is with birch. It is compelled to masquerade throughout its use, as almost everything but itself. You have birch imitation of mahogany, of walnut, of cherry. It does not make any difference whether you are imitating these woods with plain white birch, or curly birch, or plain red birch. The imitators are indiscriminate. Great will be the gratitude of the birch enthusiast the day some of these imitators, in a moment of carelessness, imitate birch with birch. Nine men out of ten, in discussing the wood, will invariably make pre-eminent to all its other qualities its readiness to take mahogany stains. A finisher will take white birch beautiful in itself in the natural or slightly darker stain) and daub it up with a thick, gluey mixture, and behold, you have mahogany! Well, now, have you? As a matter of fact, you have not mahogany and you have not birch. "It is neither fish nor fowl." In some varieties of red birch, when used in small pieces and furniture, it may take experts to detect the imitation, but never in broad paneling. In the majority of cases, as mentioned before, birch is used as a counterfeit, the only difference being (in the writer's opinion) that the counterfeit in itself is of greater beauty than the material it counterfeits. This indiscriminate abuse of what is perhaps our most beautiful American wood, has made birch a martyr, and we fear its real worth may never be duly appreciated, until, like many other things, its supply begins to grow scarce.

Red birch, with its variety of curly birch, of course is used in imitation work with much more sense and justice than white birch. It is darker than the latter, and the resemblance of grain and figure is closer, but the very qualities that render the simulation possible are qualities which in themselves make birch the ideal decorative wood of America. It has richness of tone and figure. It is not porous, and requires no filling, consequently takes a very high polish. There is nothing garish about it, such as one finds in the much sought after quarter-sawed oak or sycamore. It has dignity and stability, and is more durable than mahogany. It is easily worked, and when properly dried shrinks very little and holds its shape. There is no pulling apart at the joints. It is true, birch is liable to wind checks in the growing tree, but this fault is easily obviated by selecting the wood. As far as we know this is the only fault, and not a great one at that. It might be called the aristocrat of woods.

Now, as a matter of fact, one will find, in discussing the subject, that there is no great objection to the use of birch for any inherent fault in the wood itself. It is simply "damned with faint praise."

Let us take up the numerous objections usually offered for the non-use of any particular building material. Step by step they are: First, price; second, supply; third, working qualities; fourth, durability, and fifth, appearance. The first two objections can be treated together, as they regulate each other to a great extent. Birch is plentiful, but more than that, it is accessible. The New England and Eastern States have vast quantities of it. In the upper peninsula of Michigan, in a great many vicinities known for their white pine and hemlock, birch is practically the only good hardwood on the tracts. Throughout Minnesota and Wisconsin it is quite the same. This country is close to the lumber manufacturing markets naturally, and the lumber in sight will last for many years to come. Consequently we find birch selling at maple prices (a wood whose sole merit practically is its durability). We find birch selling far below plain oak or ash, its inferiors in working qualities, and we venture to add (at the risk of controversy), in appearance and durability. Plain white, or plain red birch, is fairly plentiful at the present demand. Its price is low. Curly birch is scarce in the same proportions. Its price is high. A curtailment of supply or an increased demand would vary the situation gravely. The fact remains that the present supply of birch is great, while the selling price of the general variety is low. (An argument in its favor from a business standpoint.)

The third questions is that pertaining to manufacture and working qualities. Birch is a fine grained wood. That is, its texture is close and runs straight for the most part. It is hard and heavy, but not cross-grained or tough. It does not need to be planed both ways, for instance, or scraped or surfaced to the extent of elm, sycamore, oak or ash. It takes glue joints almost perfectly, and this, in door work, is something to be remembered. Birch is very easily cleaned up in preparation for a finish and presents a surface hard and even. One will rarely ever see birch veneered panels pulling or warping away from the mouldings, as is very common in other hardwoods. A slight checking is sometimes seen in some birch lumber, but as mentioned above, that is entirely a fault in the growing tree, and does not result from any methods of manufacture. This fault is one easily apparent, and lumber thus affected should be kept out of finishing grades.

Of the fourth question, that of durability, there is not much doubt. The wood is not only heavy, but is extremely hard and smooth. In interior finish or furniture this quality is of great importance. At present there is, for instance, a great deal of artificial enthusiasm being worked up in the interests of cypress. Cypress beveled siding or shingles, when exposure becomes a factor, are incomparable, but when it comes to interior finish, it is another proposition. It is not easy to hold in place, but warps and shrinks. But above all things else, it is soft. It mars and dents and scratches, and that is something which will forever bar it from any extensive interior finish uses, even were it true (which it is not) that its figure is of sufficient beauty to counteract these other defects. Now birch, in contrast with these others, does not dent or mar. Not being porus, consequently does not absorb sufficient moisture to affect its life. To quote a colloquialism, "it stays put." This quality of permanence is of the greatest importance, and in this respect we find birch faultless.

Fifth, and lastly, we come to perhaps the chief characteristic, and one which, in most cases, decides the selection of any wood, i.e., its appearance. There is nothing startling in the first glance of any birch interior. It is essentially quiet and well behaved. Its figure does not stick up like a bas relief from the surface appearance. It seems to be conscious of its beauty and is satisfied to reserve its charms for the appreciative only. Quarter-sawed oak is blatant and noisy, and is constantly waving its curious figure, in frantic fear that you will pass unheeding; but you will notice that the richest of quarter-sawed oak, plain oak, or ash, is finished quietly nowadays. It needs subduing, hence the weathered oak so much in use. Quietness and refinement of tone are essential to all beauty, and birch lends itself to the combination most admirably. Curly birch, finished in rich chocolate brown or flesh colors, is superb, and need take no pointers from the much vaunted ma-

hogany. The moment you go further, and attempt mahogany finish, you have worked havoc with your birch, and you have not attained your mahogany. For white birch we would suggest light finishes, that is, natural finishes. For plain red birch or curly birch a darker finish should be used. To use, for instance, a wine-color stain on a naturally light wood, such as white birch, would be as senseless as the putting of an overcoat on a marble statue. Above all, a thorough rubbing to take away the cheap varnish shine should be the last operation in birch finish.—American Carpenter and Builder.

COST OF HANDLING LUMBER.

A writer in Packages asks for the following information: "Will you kindly advise me in your next issue, if possible, what the average box maker figures the cost per thousand feet for handling his lumber through the lumber yard, including all charges from the time the lumber is landed in his yard, piled, taken down again to bring into the mill, also covering insurance, interest charges, and all fixed expenses, so far as the lumber yard is concerned? Would like to have you also mention the amount usually figured for fixed expenses per thousand feet of lumber handled cut up in box factories."

The answer given is: To answer this question specifically would be about as difficult as to answer a question pertaining to the possible cost of a new spring bonnet for a man's wife. There is a resemblance between the questions in more ways than one, too. For the cost not only varies considerably, but also generally amounts to more in the end than one figures it ought to. Some box factory men keep a strict account with their lumber yard, but, as a rule, the box factories do not seem to figure on the lumber yard cost separately from the general cost of getting in and working up lumber. So information from past experiences is not as plentiful in this line as it is in regard to the cost of manufacturing boxes.

The retail lumbermen of the country have done more figuring on cost of unloading, yarding and selling stock out of the yard than the box people, but, even among them, the cost varies widely, and different people have different ideas in regard to it and what the figures should be. The enterprising retail lumbermen of to-day figure that they need 20 per cent. to cover the cost of yarding and handling the stock, to make them a fair amount of profit on the lumber business. But the cost, either on the percentage basis or figured per thousand feet, varies materially with local conditions and the kind of stock being handled. So each man really has to figure it out for himself, according to his facilities for handling stock and the value of his yard room. It would probably be an eye-opener, too, for them to do more figuring on the cost of handling and yarding lumber, entirely separate from making it into boxes. They would probably discover thereby that these costs exceed what they think they ought to.

As to the amount figured for the cost per thousand feet of lumber for working it up in the box factory, the variation in costs is pretty wide, ranging in general work from $8 to $15, and, in some small work, like druggists' boxes, and other light packages of this class, it must run above the $15, but just how much we are not informed. Four or five years ago, it was quite a practice in box meetings to give blackboard exercises on this point, and at a past meeting the following was reported as the cost of made-up boxes per thousand feet of lumber:

Sawing, ripping, cross-cutting, etc....	$1.25
Making	1.90
Charge for labor, including handling, planing mill work, engineer's work, fireman, office, etc.....	3.10
Other expenses, including rent, insurance, taxes, interests, etc...	1.85
Nails, glue, sandpaper, etc...	.70
Hauling	.95
Cost per 1,000 feet...	$9.75

In connection with this, it was pointed out that the cost that year was nearly $2 in excess of what it had been the year before, and it is reasonable to assume that the cost of manufacture has continued to advance. Just how much, it is hard to say. Probably a part of the advanced cost of manufacture has been taken care of by more improved machinery, but the general consensus of opinion is that the cost of manufacture has increased, entirely apart from the increased cost of lumber itself, and notwithstanding the introduction, from time to time, of more modern methods. But one should bear in mind that no specific figures relating to cost can be used as a guide, unless there are first given specific sizes and classification of the box in question.

AN EASTERN CONCATENATION.

The advisability of holding another Hoo-Hoo concatenation in Ontario is being discussed. We understand that Berlin, St. Catharines, Toronto and one or two other cities have been mentioned as suitable meeting places. The Vicegerent Snark, Mr. W. A. Hadley, of Chatham, is ready and willing to hold a concatenation whenever a sufficient number of candidates can be assured, but he is also desirous that there should be ample time to give all the members due notice. He will be glad to receive suggestions.

NEW SALES MANAGER.

Mr. Robert F. Harrison, of Manchester, England, recently arrived in Montreal to take charge of the belting business of Messrs. F. Reddaway & Company, manufacturers of "Camel Brand" belting. He has taken a short trip through Ontario and reports very favorably on everything Canadian, especially their hospitality and courtesy compared to those across the line, where he has taken three month trips for the past seven years.

WEIGHTS OF LUMBER.

One of our subscribers has requested us to publish the weights of the different kinds of lumber. The following figures are taken from Baughman's Buyer and Seller:

Weight of Hardwood Per Thousand Feet Board Measure.

	Green. Pounds.	Dry. Pounds.
Ash	4,500	3,500
Beech	5,000	4,500
Birch	4,500	3,500
Bass	3,500	2,500
Hemlock	3,900	3,250
Chestnut	4,000	3,000
Cherry	4,500	3,200
Butternut	3,750	3,200
Cedar	4,000	3,000
Hickory	5,000	4,500
Maple	5,000	4,500
Maple, soft	4,000	3,200
Mahogany	5,250	4,500
Oak	5,000	4,000
Poplar	3,250	2,250
Walnut	4,500	3,200
Hemlock	3,200	3,700

Weight of Pine Per Thousand Feet Board Measure.

White Pine.	Dry. Pounds	Green. Pounds.
Timber rough	2,500	3,250
Lumber, rough ...	2,400	3,000
Lumber, dressed ..	2,000	2,500
Lumber, D. & M...	1,800	2,400
Lumber, O. G.....	1,500	1,900
Side & 3-8 ceiling.	800	1,250
Shingles	250	450
Lath	500	950

Norway Pine.	Green. Pounds.	Dry. Pounds.
Timber, rough	3,500	2.750
Lumber, rough ...	3,250	2,650
Lumber, dressed ..	2,900	2,300
Lumber, D. & M...	2,600	2,000
Cedar Shingles ...	300	200

Are the above weights accepted as correct by the Canadian lumbermen?

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THE NEWS

ONTARIO.

Mulholland & Company's veneer mill at Sundridge was recently destroyed by fire.

The will of the late Nathanial Dyment, of Barrie, Ont., has been filed for probate. The estate is valued at $1,594,660.

Mr. B. Langford's sawmill at Lucan, Ont., was completely destroyed by fire on April 18th, the loss being partially covered by insurance.

W. Dakins, of Winnipeg, was a recent visitor at Fort Frances, where he contemplates the erection of a sash and door factory and sawmill.

The Sutherland sawmill at Canifton collapsed about a week ago and sank into the river. It is thought that a new mill will be erected on the site.

Mr. Henry Wise has removed his sawmill from Hillsdale, Ont., to the new Toronto-Sudbury line of the C. P. R. at Craighurst, and has installed considerable new machinery.

Merritt & Company are about to erect a new stave mill at Stratford. The main building will be 44 x 70 feet, while lumber sheds, new dry kiln and other buildings will also be erected.

The Lemcke Tug Company, of Lion's Head, Ont., has been incorporated by the Ontario Government, with a capital of $20,000. The incorporators include C. Pedwell, C. Lemcke, and J. Waugh, all of Lion's Head.

A new lumber company has been formed at Huntsville, known as the Highland Lumber Company, Limited. The provisional directors are: A. Tait, J. T. Harvie, O. D'A. Tait, E. C. Wainwright and H. L. Heath.

A serious accident occurred at Conn, April 20th, when the 80 horse-power boiler in A. C. Bishop's sawmill exploded. The mill was demolished, two men were killed, and another injured. The cause of the explosion is not known.

The Ontario Government has passed a bill permitting the town of Thessalon, Ont., to grant a bonus of $10,000 to the Saginaw Lumber & Salt Company, which, as announced in last issue, proposes to remove its sawmill from Sandwich to Thessalon.

The International Veneer & Lumber Company, Limited, Renfrew, have obtained a charter from the Ontario Government, with power to carry on a general lumber business. The provisional directors consist of T. E. Porter, W. H. Burgin, and D. MacArthur.

The employes of Mr. J. R. Booth, Ottawa, were last month voluntarily given an increase in pay ranging from 10 to 25 per cent. The increase will mean that over $50,000 more per year will be earned by the workers who live in Ottawa and Hull. About two thousand men and boys are affected.

THE EASTERN PROVINCES.

J. A. Madeau, who operates a sawmill at Carleton, Que., has assigned.

J. Coutere and S. Belanger, who operate a sawmill at Napierville, Que., have registered.

The Prescott Lumber Company's shingle mill at New Mills, N.B., was totally destroyed by fire on April 18th.

The Federal Lumber Company, Limited, Montreal, Que,. have registered their business, with Mr. J. A. Ranger as president.

The woodworking factory at Sackville, N.B., until recently operated by Burke & Seaman, has been purchased by C. A. Milton.

The lumber business carried on at Rexton, N.B., by J. & P. Jardine, Limited, has been sold to J. H. Hickman, of Dorchester.

A sawmill at Scotch Settlement, N.B., owned by Mr. G. H. Cochrane, was recently destroyed by fire, resulting in a loss of about $3,000.

P. A. A. Dufresne and J. C. A. Dufresne have registered their lumber business at Montreal under the name P. A. A. Dufresne & Frere.

The lumber business carried on at Brompton, Que., by Lamontagne & Morin, has been registered by the respective partners, J. Lamontagne and G. Morin.

The steam sawmill at Red Beach, N.B., owned and operated by Mr. O. S. Carbox, was destroyed by fire on March 30th. The loss is estimated at about $5,000.

Benoit & Sons' sash and door factory at Montreal was damaged by fire on April 1st to the extent of $7,000.

The Anthony Lumber Company, South Maitland, N.S., are erecting a large sawmill and power house. The machinery to be installed is estimated to cost $75,000.

Mr. L. O. Beaulieu has opened an office in the Hochelaga Bank Building, Quebec, where he will purchase and sell timber and building material on a commission basis.

I. W. Fisher, C. M. McCormack, J. A. Nevers, J. C. Hartley, and others, all of Woodstock, N.B., have been incorporated as the Carleton Woodworking Company, Limited, and will carry on a general woodworking business.

The Hillsboro' Hardwood Flooring Company, Limited, Hillsboro' N.B., have obtained a charter from the New Brunswick Government, with an authorized capital of $30,000. The incorporators include R. G. Haley, H. W. Gross, J. W. Vanwort, and J. M. Queen.

The lath mill of the Scott Lumber Cumpany, Fredericton, N.B., was destroyed by fire on April 9th. The mill was equipped with two modern lath machines, and had a capacity of 83,000 laths per day. The loss is estimated at $5,000.

The Harricana Lumber Company, Limited, Hull, Que., has been incorporated by the Quebec Legislature. The capital is fixed at $250,000, and the incorporators include F. A. Gendron, H. A. Goyette, both of Hull, A. E. Hitchcock, of Ottawa, and N. Drouin, Quebec.

At the annual meeting of the Tobique Log Driving Company, held at St. John on April 3rd, the following directors were elected: D. Fraser, J. R. H. Hilyard, N. M. Murchie, R. A. Estey, Chas. Miller. The driving was let to the Tobique Manufacturing Company at 25 cents per thousand to the forks and at the same proportion below.

The lumber business at St. John, N.B., which in the past has been carried on by W. Malcolm Mackay, has been formed into a joint stock company, under the name of W. Malcolm Mackay, Limited, with an authorized capital of $100,000. Among the incorporators are W. Malcolm Mackay, F. S. White, A. Dodds and F. R. Taylor, all of St. John.

In a serious fire which occurred on April 12th, the Restigouche Woodworking Company's factory at Dalhousie, N.B., was totally destroyed. A large quantity of manufactured lumber was stored in the building at the time. The mill, which had been in operation for about two years, employing about 150 men, was valued at $80,000, and the insurance carried was $49,000.

The announcement has been made that G. F. Atkinson, of Rexton, N.B., C. S. Hickman, A. J. Chapman, C. L. Hanington, all of Dorchester, and others, will apply to the New Brunswick Government at their next session for a charter under the name of the Crown Woodworking Company, Limited, with head office at Dorchester. The company intend carrying on a general woodworking business with an authorized capital of $50,000.

Everybody has heard how Menier, the "chocolate king" of Paris, France, bought the Canadian Island of Anticosti, lying in the Gulf of St. Lawrence, and what he intended to do with it. Reports are now to hand which show that development on commercial lines is going rapidly forward. Thousands of acres of land have been cleared and the soil found to be of excellent quality for agriculture. Roads and bridges have been built and quite a number of settlers induced to come from the mainland of Quebec. The capital of the island is Ellis Bay, and here a breakwater nearly a mile long has been built. There is a large water power at Vanreal 20 miles from Ellis Bay, where a sawmill is already in operation, and it is proposed in the coming season to erect a pulp mill. The island is reported to be thickly covered with pulp wood, as well as with large spruce. There are estimated to be more than a million and a half acres of pulp wood on the island.

MANITOBA, SASKATCHEWAN AND ALBERTA.

Graham Bros. have started a lumber business at Stoney Plains.

A lumber yard has been opened at Olds, Alta., by Mr. R. H. Craig.

Vatensdal & Oalfson have started a lumber business at Wadena, Sask.

Archer & Simpson, lumber dealers, Innisfail, Man., have dissolved partnership.

Rasmusson & Peterson, lumber dealers, Goodlands, have dissolved partnership.

S. A. Hamilton, lumber dealer, Raddison, has sold his business to Boyd Bros.

The Claresholm Lumber & Grain Company have opened a branch at Macleod, Alta.

The Aberdeen Supply Company, Aberdeen, Sask., have sold out to Neufeld, Epp & Company.

Frame & Miller, lumber dealers, Virden, Man., have sold out to the Beaver Lumber Company, of Winnipeg.

W. Cowan & Company, lumber merchants, Prince Albert, Sask., are erecting a new lumber shed and office.

The Moose Mountain Lumber & Hardware Company, of Heward, Sask., are about to erect a large warehouse.

J. B. Sandborn & Company have purchased the lumber business of Craig Bros. & Sandborn at Vermillion, Man.

J. T. Mills has removed his planing mill and sash and door factory from Portage la Prairie to North Battleford, Sask.

Miller & Robinson, lumber dealers, Lloydminster, Sask., have been succeeded by the Canadian Elevator Company, Limited.

The High River Lumber & Elevator Company, High River, Man., has been succeeded by the Alberta Grain Company, Limited.

Charters, Lee & Company, lumber dealers, Cenora, Sask., have been succeeded by R. W. Cummings & Company, Limited.

The Independent Lumber Company have sold their lumber business at North Battleford, Sask., to the Cut Knife Trading Company.

The name of the Crown Lumber Company, Limited,

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of Alameda, has been changed to the Crown Lumber & Hardware Company, Limited.

The lumber business heretofore carried on at Lashburn by W. C. Kirk has been purchased by the Canadian Elevator Company, Limited.

The Imperial Elevator Company have rebuilt and enlarged their premises at Mortlack, Sask., and will shortly commence the erection of a new elevator.

W. P. Hanson will erect a sawmill about three miles from Lethbridge, Alta. The mill will be equipped with modern machinery and will cost about $50,000.

The Swan River Company's sawmills at Fisher's Siding, Man., was recently destroyed by fire. The loss was about $6,000 and was fully covered by insurance.

The Reliance Trading Company, Limited, Taber, Alta., which was recently incorporated by the Alberta Government, with a capital of $50,000, intend dealing in lumber.

BRITISH COLUMBIA.

Wood & Spicer's shingle mill at Vancouver was damaged by fire on April 5th to the extent of $10,000.

It is said that a sawmill at the mouth of Four Mile Creek, financed by William Hunter, M.P.P., and others, is proposed.

A small sawmill is to be erected near Sechelt by Mr. H. W. Whittaker, who purposes getting out long timbers suitable for export purposes.

It is reported that the Patrick Lumber Company, which owns a large area of timber land in the Little Slocan country, will erect a sawmill at Slocan City.

It is reported that three new mills are to be established on Lulu Island, one of which will be owned by a Mr. Mahoney, and another by Mr. J. Reilly, of Winnipeg.

The Elk Lumber Company, of Fernie, have decided on the erection of a sawmill at Summitt Lake. The mill will have an annual capacity of 12,000,000 feet, and will cost approximately $100,000.

Application has been made to the Railway Commission by the Canadian Pacific Railway for permission to construct spur lines to the mills of the E. H. Heaps Company on Burrard Inlet and the W. F. Hunting Lumber Company on False Creek.

The new mill of the Claholme Lumber Company, at Claholme Falls, has been completed. The mill, which has a capacity of 40,000 feet per day, is equipped with the most modern machinery and operated by electric power developed on the Claholme falls.

The Puget Sound Wood Products Company, Limited, are about to erect a factory at Anacortes for the extraction from fir wood of a number of by-products, such as turpentine, naphtha, tar, etc. The company will later on erect a larger plant on Vancouver Island.

The British Columbia Government have recently incorporated the following companies: The Kitchener Lumber Mills, Limited, capital $50,000, to carry on lumber business in East Kootenay; the Sechelt Towage Company, Limited, capital $100,000; the Creston Lumber & Manufacturing Company, Limited, capital $40,000.

C. H. Cobb, N. C. Healey and associates, of Seattle, Wash., who recently purchased about 27,000 acres of timber on Vancouver Island, have had surveys completed for construction of a twenty-five mile railroad into their timber limits. The company will employ about 125 men and the output will be about 150,000 per day.

Messrs. W. J. Malcolm and J. P. Smith, on behalf of the Northwest Lumber Company, have purchased a portable sawmill with a capacity of 25,000 feet per day, and will cut timber on their limits to be used in the erection of either one or two mills. The Northwest Lumber Company have purchased a site on the Fraser river, directly opposite New Westminster, where a mill may be built. The new company owns large tracts of timber land on Vancouver Island, and it is probable that one large mill will be built opposite New Westminster. Messrs. Mitchell & Ferriss, of Vancouver, put through the deal for the portable mill.

In order to meet the demand for more lumber, the Brunette Saw Mills at Sapperton, B.C., are being greatly improved. A Berlin resaw has been installed. The object of the Berlin resaw is to get all the edge grain lumber possible out of a log. There will also be a complete transfer system for hauling lumber at the tail end of the mill. There will be a sorter and an improved sorting table 180 feet long, something altogether new in the line of sorting lumber and claimed to be an improvement on anything now in use. The new machinery is now in operation. Mr. Mitchell, of the firm of Mitchell & Ferriss, personally supervised the installation of the new machinery.

TRADE NOTES.

The E. Long Manufacturing Company, Orillia, Ont., have placed an order for a Duplex pump with the Smart-Turner Machine Company.

Supplementary letters patent have been issued to the Dodge Manufacturing Company, of Toronto, Limited, authorizing an increase in their capital from $190,000 to $500,000.

The Smart-Turner Machine Company Hamilton, are supplying the Victoria Harbor Lumber Company, Whitefish, Ont., with a Duplex pump.

The American Woodworking Machinery Company announce the removal of their general offices to Rochester, New York, where all mail should in future be addressed.

Shaw Bros., Dauphin, Man., have recently ordered from the Robb Engineering Company one 100 horse-power Robb-Armstrong automatic engine, for their plant at Dauphin, Man.

The business heretofore carried on at Montreal by D. K. MacLaren, manufacturer of belting and mill supplies, will in the future be known as the D. K. MacLaren, Limited, a Dominion charter having been obtained fixing the authorized capital at $250,000.

The Canadian Fairbanks Company, Montreal, have ordered from the Robb Engineering Company two 45 horse-power and one 65 horse-power portable boilers. These boilers are for use in British Columbia, and are the second lot ordered by this company within the last two months. They are known as the Robb-Mumford-Brady portable boilers, and are becoming very popular in British Columbia for sawmill work.

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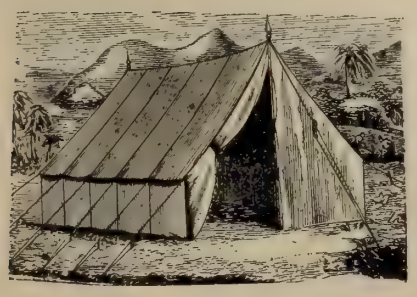

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DRYING.

This is one of the chief hazards of the woodworker. Therefore cut it off absolutely from the mill. Roof should be without hollow space, 4-inch plank "slow burning" construction or entirely of brick, parapet at sides and up to the tracks in front and rear, and if ends expose mill they should be protected by fire doors. This can be done by inclosing transfer platforms by brick walls and having fire doors at sides, the regular canvas door being used at front of the kiln proper.—Insurance item by A. L. Artz.

THE JONQUIERE PULP COMPANY.

The Jonquiere Pulp Company have mills situated in the village of Jonquiere, Quebec, consisting of a ground wood, sulphite, cardboard and saw mills. The ground wood mill is equipped with six grinders and five wet machines, is operated by water power and has a capacity of 60,000 pounds dry in twenty-four hours. The sulphite mill contains an eight-ton digester, while the cardboard mill contains one 78-inch six-cylinder Black-Clawson machine and three 1,200-pound beating engines. The saw mill has a capacity of 18,000 feet, board measure, for twelve hours. Both water and steam are used.

DANGER FROM WET SAWDUST.

One often sees a pail of wet sawdust standing in the hallway or in a closet of a building, although sawdust has been so generally displaced as a sweeping material that this is not so common as it used to be. This practice tends to increase the danger from fire, especially if the wet sawdust is left in a dark place, as it needs only to raise itself to a fixed temperature to ignite from spontaneous combustion. The temperature of wet sawdust will gradually increase, even though the temperature of the room remains the same, so it would be a proper step to exercise precaution and have no wet sawdust standing around in rooms or halls for any length of time.

TO PRESERVE THE PINE TIMBER.

To prevent mining development destroying good pine timber, the Ontario Government will spend $5,000 to make a thorough estimate of the value of the pine in the Temagami forest reserve.

Since the discovery of minerals in this district the rush of prospectors has been great, and it is feared that it may result, by fires or otherwise, in ruining the timber. It is not proposed to interfere with the staking of claims, but if it is found the value of the timber warrants it, development work will be stopped. On the other hand, if the mineral wealth seems greater than the timber wealth, steps will be taken to have the pine cut before development proceeds.

PERMANENT CAR STAKE EQUIPMENT.

Permanent car stake equipment is not wanted by the producers of cedar posts and poles, according to the Mississippi Valley Lumberman. Experiments with this kind of equipment have been made with the following results. Cedar poles differ from other timber products. Loads of this character settle during transportation, and the stakes bulge and jam so that it is impossible to remove them. It would require a derrick to unload poles one at a time, and the process is not practicable. Car loads of poles are unloaded by removing the stakes and allowing the loads to dump themselves. The permanent stakes that have been designed require the removal of the present equipment of pockets for temporary stakes, and this leaves the cedar producers out of it. The cars would go to the lumber shippers and the cedar men would be in a worse fix for equipment than they now are.

RAISING SUNKEN LOGS.

Log-lifting operations on the Muskegon river must cease. Judge Davis has decided that all sunken timber belongs to the owners of the land abutting the stream where it is found.

Log-lifters and the farmers have been at odds for fifty years over this matter, and the decision is one of great moment. It probably will mean that the farmers will be given considerable in the way of compensation for their rights.

It is known that millions of sound logs are reposing at the bottom of the 100 to 200 miles of the Muskegon river. The log-lifting company has spent many thousands of dollars in fitting up special machines to dredge the river and raise the logs. But they reckoned without the farmer.

The decision of Judge Davis probably will raise the same cry from the farmers all over Michigan. There are at least 150 streams in this State that are being, or have been, searched for logs.

GOUROCK ROPEWORK EXPORT COMPANY.

The Gourock Ropework Export Company, Limited, who opened a branch warehouse in Montreal about two years ago, have recently started a factory for the manufacture of tents. This firm does a very extensive business in all parts of the world, and are the manufacturers of the "Celebrated Birkmyre's patent waterproof cloth." This cloth when made up into tents is largely used by contractors and lumbermen. We believe that there will be a large demand for this cloth when it becomes known.

Corrugated Iron
For Sidings, Roofings, Ceilings, Etc.
Absolutely free from defects—made from very finest sheets.
Each sheet is accurately squared, and the corrugations pressed one at a time—not rolled—giving an exact fit without waste.
Any desired size or gauge—galvanized or painted—straight or curved.
Send us your specifications.
The Metallic Roofing Co.
WHOLESALE MANFRS. LIMITED
RONTO, CANADA.

SAW MILL LOSSES.

The National Fire Protective Association has recently compiled statistics which are of very considerable interest to those who are interested in the causes of sawmill fires. A brief summary of their report, printed in the Journal of Commerce and Commercial Bulletin, is as follows:

A tabulation of 85 sawmill fires made by the National Fire Protective Association shows that 37 were due to common causes and 18 to special hazards, while the causes of 30 were unknown. Of the common causes the boiler and fuel started 15, and the power 12. Of the special hazards, dry kilns were responsible for 8 losses, the sawdust vaults and the refuse burners for 3. Forty-two per cent. of the fires occurred in day time; 8 per cent. at night. Forty-nine occurred while the plant was in operation and 51 while it was not. Thirty-six of the plants were sprinklered, the equipment extinguishing the fire in 12 cases, holding it in check in 13, and working unsatisfactorily in 11.

You Can Save Money Turning Balusters

Besides Making More of Them and Much Better Ones

If You Will Use

Our No. 2 Baluster Machine

Turns Balusters, Spindles, Table Legs, any pattern, hard or soft wood, 1,000 pieces daily. Does perfect work at less cost than by hand. Stock is held in chucks, instead of between centres, avoiding all vibration. If you make balusters you should investigate carefully.

May we send samples of work and detailed description?

C. Mattison Machine Works, Beloit, Wis.

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A Veterinary line prepared especially for Lumbermen and Contractors and used by them for over thirty years.

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Dr. J. M. Stewart's Sure Cure for Galls, Colio Cure, Pure Condition Powders, Excelsior Liniment, Hoof Ointment, Heave Relief and Proud Flesh Powders.

Guaranteed to prove satisfactory or money refunded.

Send in your order to-day or write us for prices and booklet.

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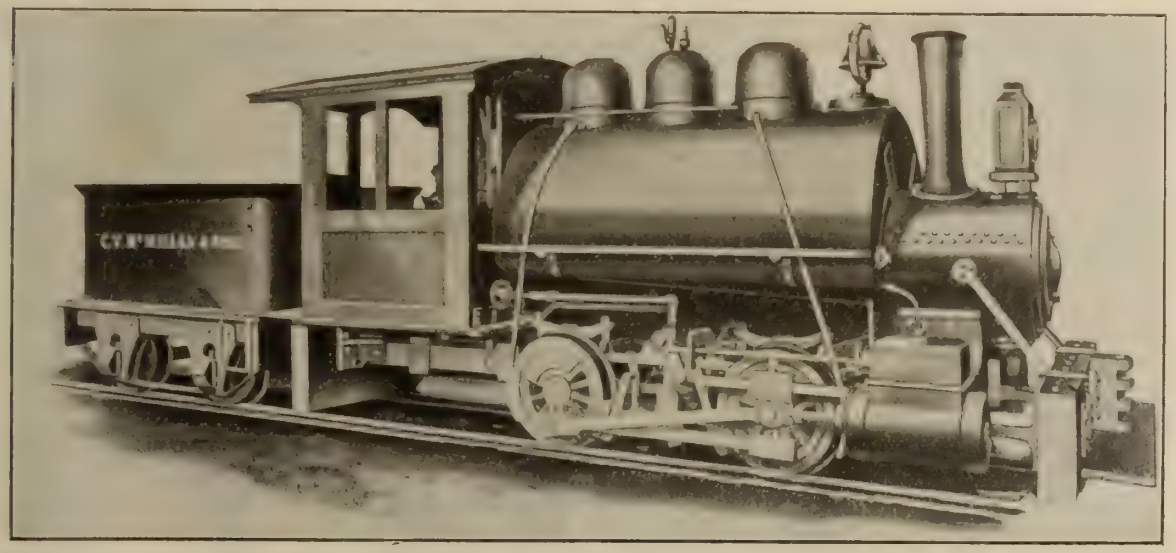

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MANY TYPES ANY GUAGE
ALL SIZES PROMPT SHIPMENT

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Manufacturers Canadian Lumber

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Band Sawed Hemlock, Spruce, Pine, Basswood, Birch, Oak, Butternut, Maple, Cedar and Ash Lumber, Lath and Shingles

SPECIALTIES: **Hemlock, Spruce and Pine Timbers**

We own and operate the Lmon River & Northern Railway, which delivers our logs direct to mill [no logs being floated] and enables us to furnish special length timbers promptly at any time of year.

Saw Mills and Planing Mills located on C. P. R and Ottawa River 70 miles west of Montreal

LOG DRIVING ARBITRATION.

A dispute arising from log driving operations in 1906 was the subject of an arbitration during the past month, the interested parties being the C. Beck Manufacturing Company, of Penetanguishene, and the Ontario Lumber Company, of French River. The logs of those companies are driven down the Wahnapitae river from Wahnapitae Lake to the French river. The Beck Company ran some logs over a dam, whereupon the Ontario Lumber Company followed suit, with the result that the logs became intermixed. The Ontario statute provides that when logs become mixed each party must supply men for the work of driving in proportion to the number of logs owned. The Ontario Lumber Company claimed that they had supplied more than their proportion of men. They applied for an arbitration under the Sawlogs Driving Act, and were awarded $900 as the amount they should receive from the Beck Company.

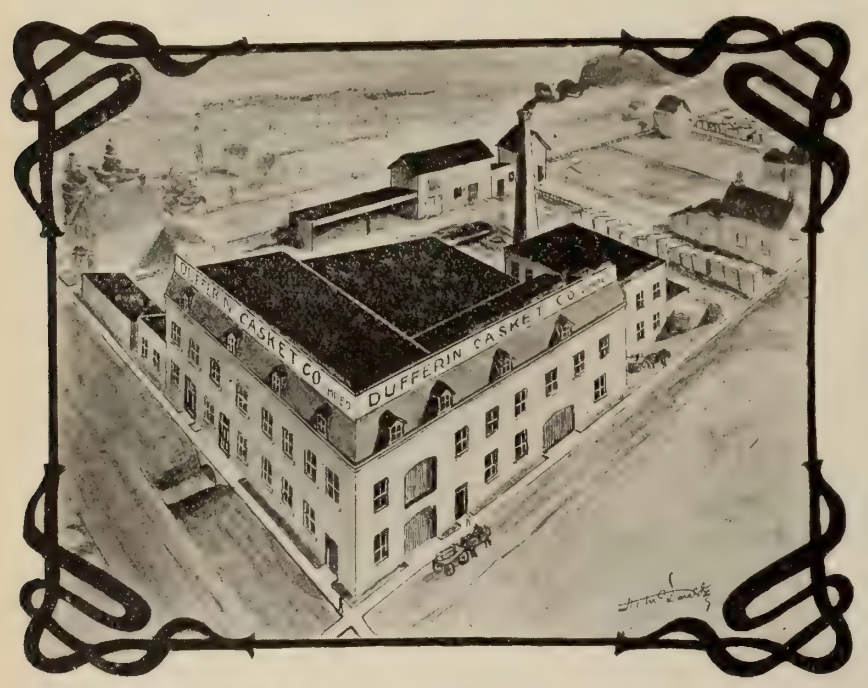
The Beck Company entered a claim for damages on the ground that the Ontario Lumber Company was responsible for the mixing of the logs, such damages resulting from the sinking of logs, delay, etc. This claim was disallowed, however, as, the river being a public highway, it was held that all parties were entitled to use it at all times.

The arbitrators in the case were Messrs. A. A. Wright, R. D. Perry and Frank Denton, K.C., the latter being appointed by the court as the third arbitrator.

PERSONAL.

Mr. John R. Booth, the veteran lumberman of Ottawa, celebrated his 81st birthday on April 5th. Mr. Booth is still hale and hearty and received many congratulations from his friends.

The difficulty of retaining good men in the Government service while the present inadequate salaries are paid has been recently emphasized by the resignation of Mr. Roland D. Craig, late Inspector of Forest Reserves for the Dominion Government. Each year the Geological Survey Department loses some of its best men on this account, and now that lumbermen are realizing the importance of forest preservation and the introduction of approved forestry methods in lumbering operations, it is natural that they should look to Government offices for experienced men. Ontario has recently lost the services of Dr. Clark, while in the Forestry Branch of the Dominion service, the late Superintendent, Mr. E. Stewart, and Mr. Craig have both resigned during the past few weeks. Mr. Craig is a yougn man, but since his graduation as a Bachelor of Applied Science in 1898, his whole time has been devoted to forestry work. After a two years' course at Cornell, he graduated as a Forest Engineer with the highest honors. As an officer of the United States Bureau of Forestry (now Forest Service), he was at the head of a party conducting studies in the natural production of forest trees in California. On April 1st, 1904, he was appointed an inspector of tree planting in connection with the Canadian Forestry Department, and parts of two seasons were spent in the West in this work. In 1905 Mr. Craig was appointed Inspector of Forest Reserves.



FACTORY FOR SALE

THIS Brick Factory for Sale, located at Orangeville, Ont., a town of about 4000 population, about 46 miles from Toronto, right in the way to Owen Sound, splendid for shipping goods through to the Northwest, and on account of being in such close proximity to Toronto, might be almost recognized as one of Toronto's suburban towns. Might also just say that the C.N.R. is surveying through Orangeville at the present time, on the way to the lakes, to look after western trade.

This factory, situated three blocks from the market square, in Orangeville, has about 18,000 square feet of floor space, with a most modern dry kiln, that will take over 30,000 feet of lumber at once. It is equipped with all kinds of modern woodworking machinery, all set up ready for running. All you have to do is to set the furnace going, turn on the steam, and round go the wheels. It is situated in one of the best labor-producing sections in the country, there being no other industries there to monopolize the labor. From what we can understand there is lots of female as well as male labor to be had.

We are informed that surrounding Orangeville there is considerable timber cut in small quantities by small mills in the way of basswood, maple, ash, considerable elm and some oak, which can be purchased in Orangeville for about ⅓ the price it can be procured for in Toronto on account of timber there not being manufactured on a large scale. There is no doubt but what this factory would make a splendid factory for cabinet-work, piano or wood novelties, or special wood work of any kind, on account of its close proximity to Toronto, the great market for this class of goods, and on account of the very low price of timber and labor there.

If anyone wants a snap in the way of a good brick factory, with all equipments, for a very small investment, now is the time to speak, as we feel confident you will never have another chance like this again in a lifetime. It came into our possession about 10 days ago, and as we have no earthly use for it, and on account of the way we purchased it, are willing to let it go for a mere song.

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SILVER Plating Plant consists of all kinds of solutions, machinery and apparatus for plating all kinds of metals. Also have 8 sets of copper glue pots with piping complete. Each set of glue pots consists of three copper pots, two users and one in the centre, larger, for boiling.

Anyone desiring a snap in either of these lines of goods now is the time to speak quickly.

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THE REASON WHY

The enlarged diagram above tells the story.

If you examine it you will notice that it is composed of five different layers.

In fact, Amatite is made on a different principle from any other roofing. Instead of a smooth skin coating *made to receive a coat of paint*, Amatite has a rough surface of small particles of hard silicious rock such as seen in quartz or other hard stone when examined under a microscope.

This mineral surface is chosen for its weather-resisting qualities, and does away *absolutely* with *painting* and *coating*.

Underneath the mineral surface are alternate layers of long-fibre, wool-stock felt of the best grade, and between each sheet and under the mineral surface on the top is a layer of a specially prepared Coal Tar Pitch, *the greatest waterproofing material known.*

This short description will give you some idea of how carefully Amatite is constructed and what effective protection it will give against weather of all kinds.

FREE SAMPLE

The best proof, however, is to see a Sample, which we will send to any one free upon receipt of name and address. Write to nearest office.

Barrett Manufacturing Co.
New York Chicago Cleveland Allegheny Kansas City
St. Louis Boston Minneapolis Philadelphia
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PATERSON MANUFACTURING CO., LTD.,
CANADIAN AGENTS,
TORONTO and MONTREAL.

THE COMMERCIAL TRAVELLER VS. THE AD.

There is no versus to it—one is the support of the other. It's all nonsense to believe that a territory is covered because a traveller goes over it once every year, or every six or three months. He may get the business that is going at the time he is on the ground, but, how about the intervening time? How about the time before he has appeared at all? How about the little places he has missed—did not think them worth while, or perhaps did not find the buyer at home when he called? That is where the advertisement comes in. The ad. goes before the traveller and proves an introduction for him. It's there when he is there, and it comes along after he is gone to remind the customer of him—and the house he represents. It's working all the time.

If you are making improvements to your mill, send the particulars to the CANADA LUMBERMAN.

HIGH GRADE
CANOES, ROW BOATS
and
GASOLINE LAUNCHES

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STEAM PROOF
WATER ,,
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Screw Cutting Lathe, 10 ft. bed, 16" swing, very little used; in fine condition, a chance to secure good modern Lathe at a bargain.

Also large Drill and Slotter, 24" Swing, in first-class condition

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As can be seen by the engraving, the frame is cast in one piece. The legs of cast iron are cast in one piece with the saw bench. This makes an extremely substantial machine.

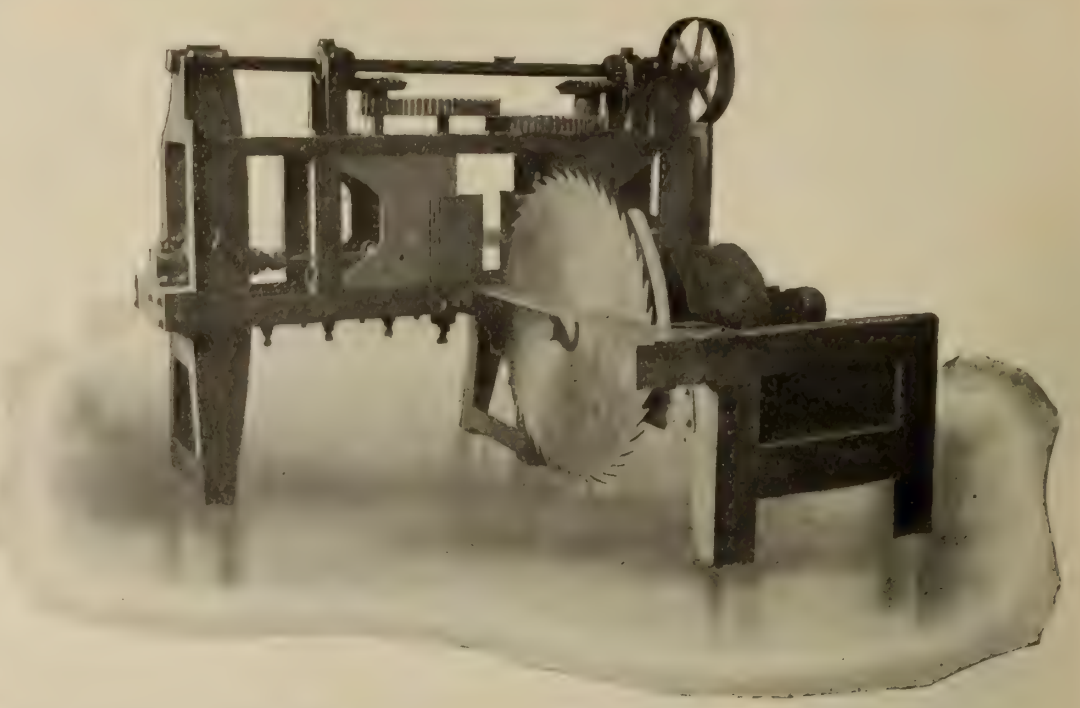
The feed rolls 12" diameter are driven by cut gears 16" in diameter. The proportions of the gears are such as to give a powerful driving mechanism.

The arrangement to set the stationary roll (not shown in the cut) is very accurate, quick and reliable. The clear distance between the slides is 19."

The steam press is of improved construction and has a travel of 10"

The saw is 42" and saw arbor bearing is set in slide so that saw can be brought closer to the rolls, as it wears.

The weight of the machine s 3,000 lbs.



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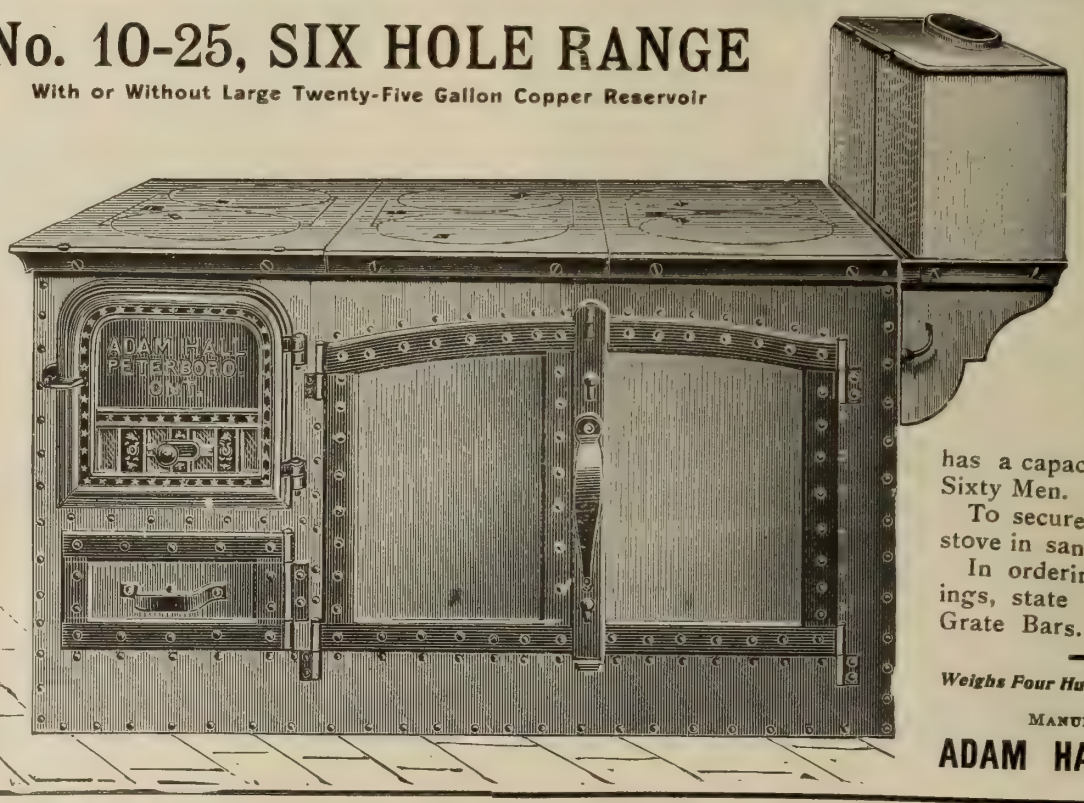
No. 10-25, SIX HOLE RANGE

With or Without Large Twenty-Five Gallon Copper Reservoir



Size of Top, 54 inches by 30 inches; Size of Oven, 24 inches wide, 28 inches deep and 16 inches high; Fire Box, 28 inches, —Wood.

This Range has the large Copper Reservoir and gives the full use of the top for Boiling purposes. It has a capacity to cook for Sixty Men.

To secure best results set stove in sand box.

In ordering Fire Box Linings, state if long or short Grate Bars.

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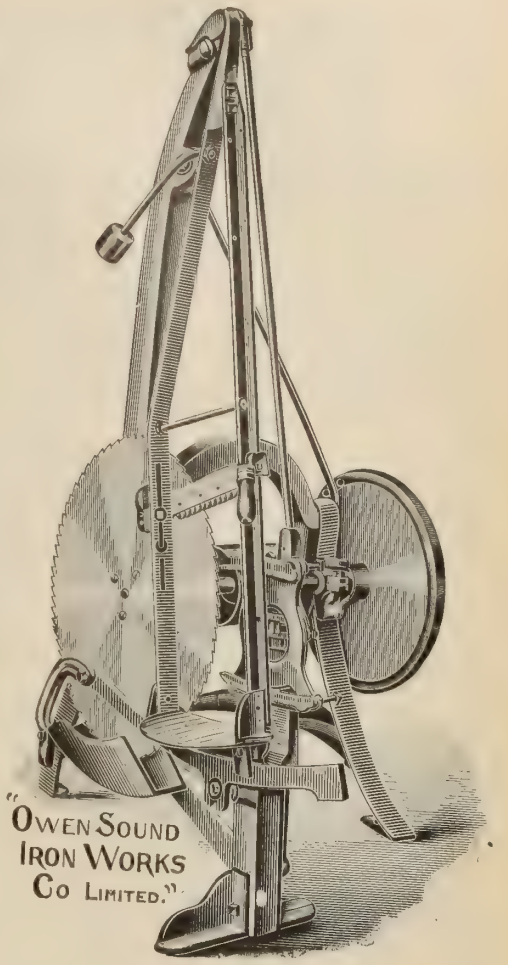
30,000 SHINGLES IN 10 HOURS
Can be Cut by Our
IMPROVED SWING SHINGLE MACHINE

This machine is also specially adapted for cutting headings, and adjustments can be quickly made. This is the cheapest priced and best machine on the market. It is also the cheapest because it will cut more and better shingles out of your refuse than any other machine.

Can you afford to burn your refuse at the present price of lumber? It means money to you. Save it.



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Manufacturers of all kinds of Saw Mill Machinery
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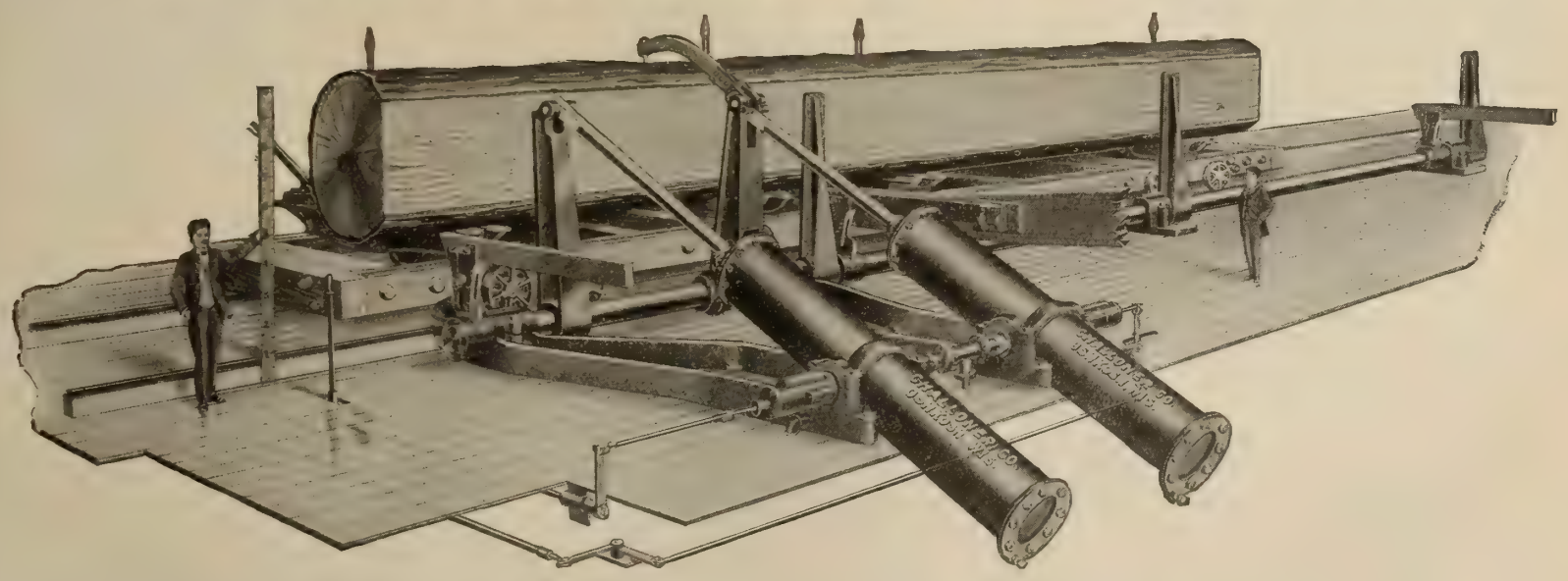
THE SIMONSON LOG TURNER



This is the only Log Turner that uses no tooth bar and turns the log away from the carriage.
The log is turned on the log deck, thus relieving the carriage of all strain and jar.
Will handle small logs as quickly as any "nigger" and logs scaling 500 feet and over much quicker. Will handle larger logs than is possible with a "nigger."
Don't buy a Log Turner of any kind till you investigate the Simonson.

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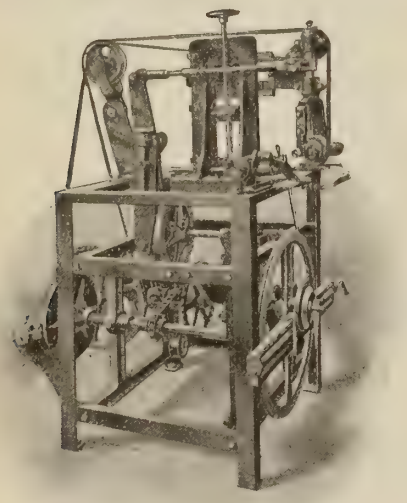

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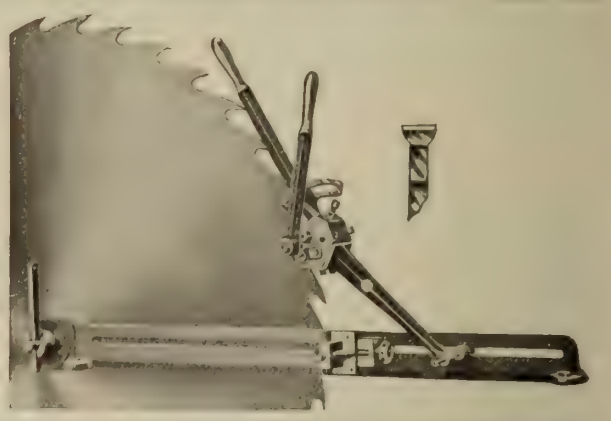

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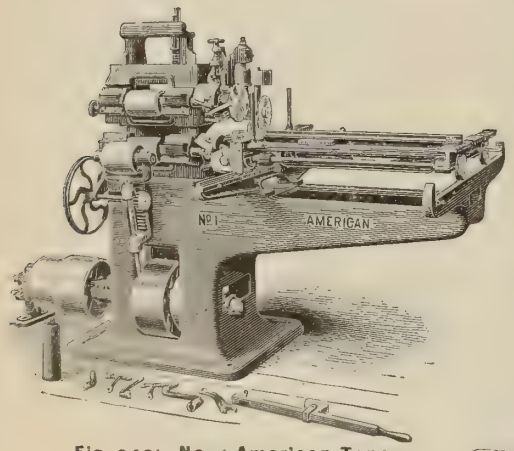

Fig. 9421—No. 1 American Tenoner.

American Woodworking Machinery Company
136 Liberty Street, N. Y. CITY

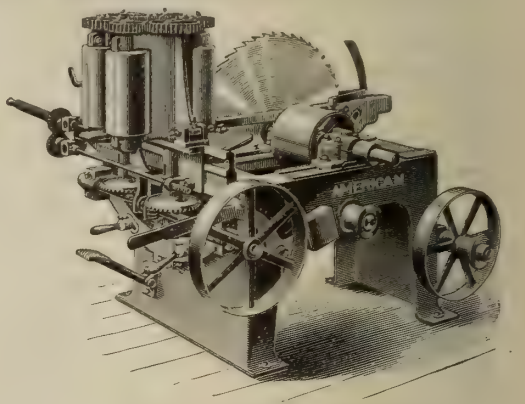

Fig. 539—No. 6 Hoyt 32" Re-Saw.

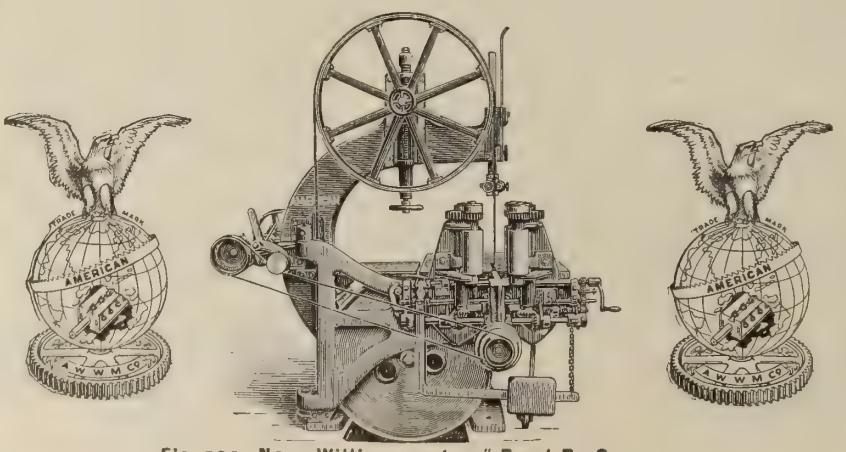

Fig. 503—No. 4 Williamsport 40" Band Re-Saw.

American Woodworking Machinery Company
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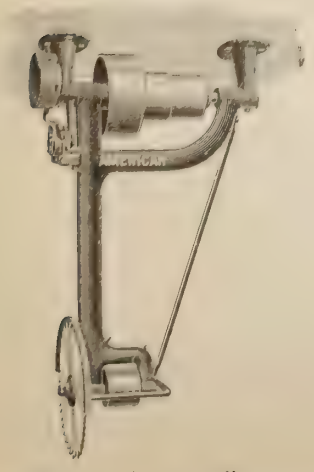

Fig. 604—Houston Heavy Swing Saw.

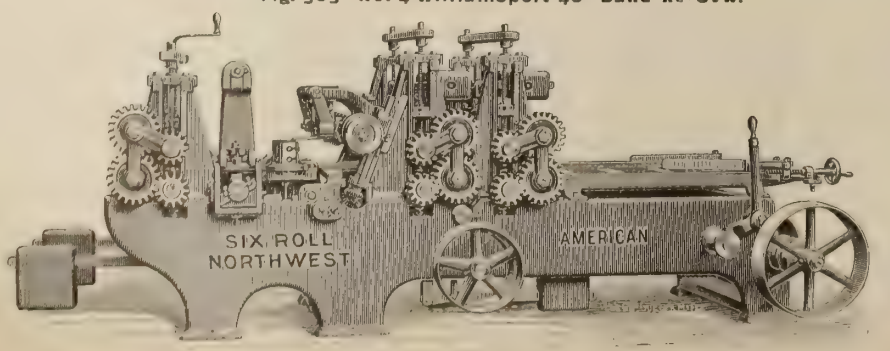

Fig. 6783—Six-roll New Northwest 26" by 8" Planer and Matcher.

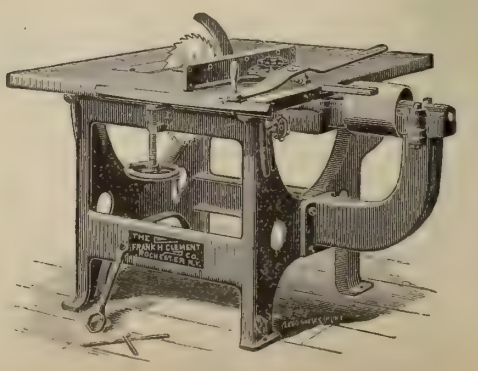

Fig. 575—No. 2 Clement Iron Frame Rip Saw.

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OFFICE, SCHOOL, CHURCH & LODGE FURNITURE.
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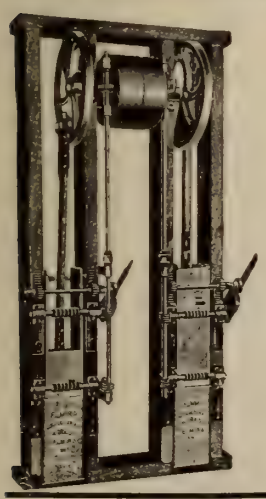

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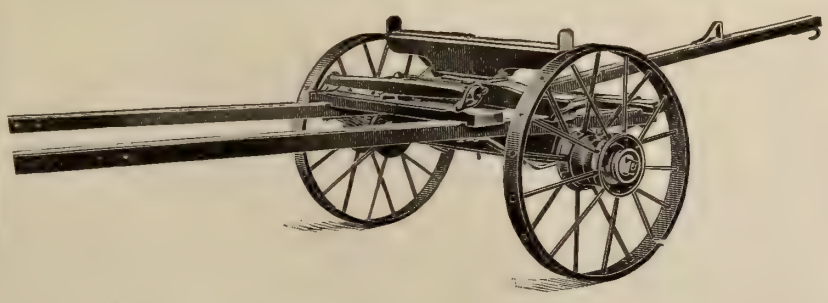

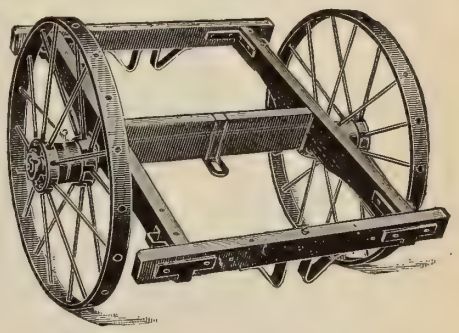

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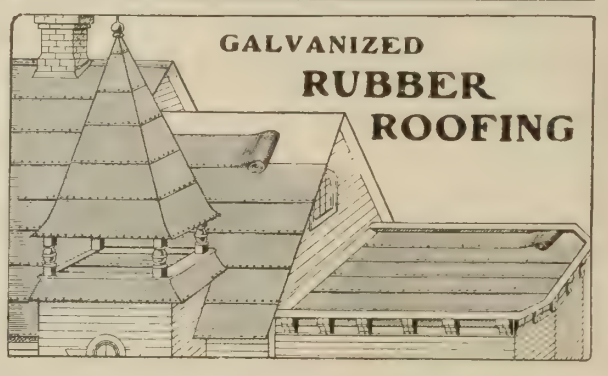

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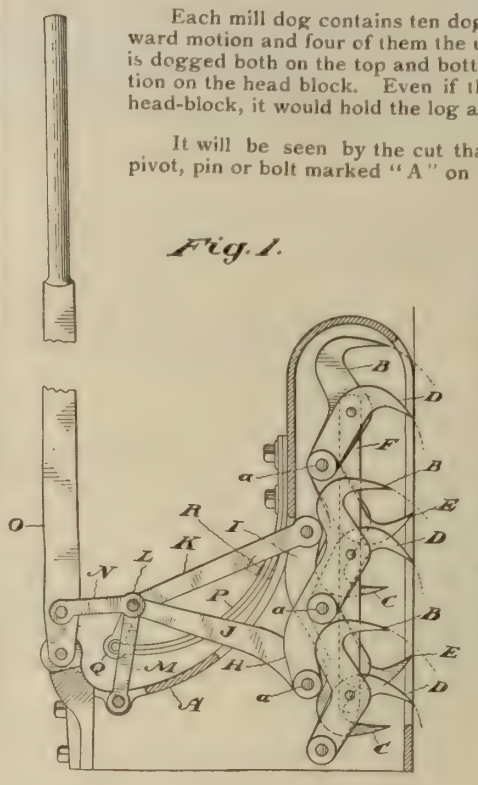

Fig. 1.

Each mill dog contains ten dogs; six of the dogs have the down-forward motion and four of them the upward motion, so that the log or cant is dogged both on the top and bottom, preventing it from turning its position on the head block. Even if the log were dogged, not touching the head-block, it would hold the log as well.

It will be seen by the cut that these ten dogs are fastened on the pivot, pin or bolt marked "A" on the cut, and connected with link bars from the principal dog to the lever "O," which operates all the dogs.

There are five of the dogs which project more than the others, about two inches from the head block, and called the log dogs; and five which project about ⅝ inch from the head-block, and called the board dogs; but when dogging a board or a plank or a stock, all the dogs come evenly out of the head block, about ⅝ inch, so that in dogging a board or a stock, both the log dogs and board dogs grip it, providing that the stock or board is wide enough to take all the dogs.

This patent mill dog will dog perfectly safe in all classes of timber, be it pine, hemlock or hardwood of any description, and besides it does not tear the board or stock.

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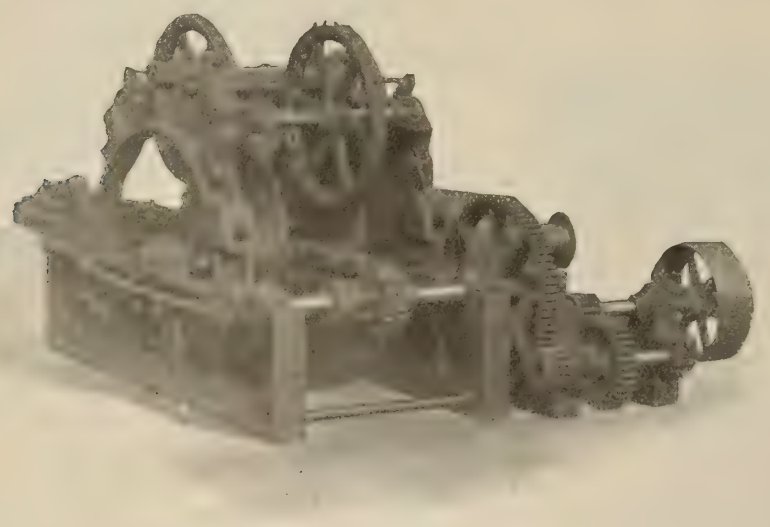

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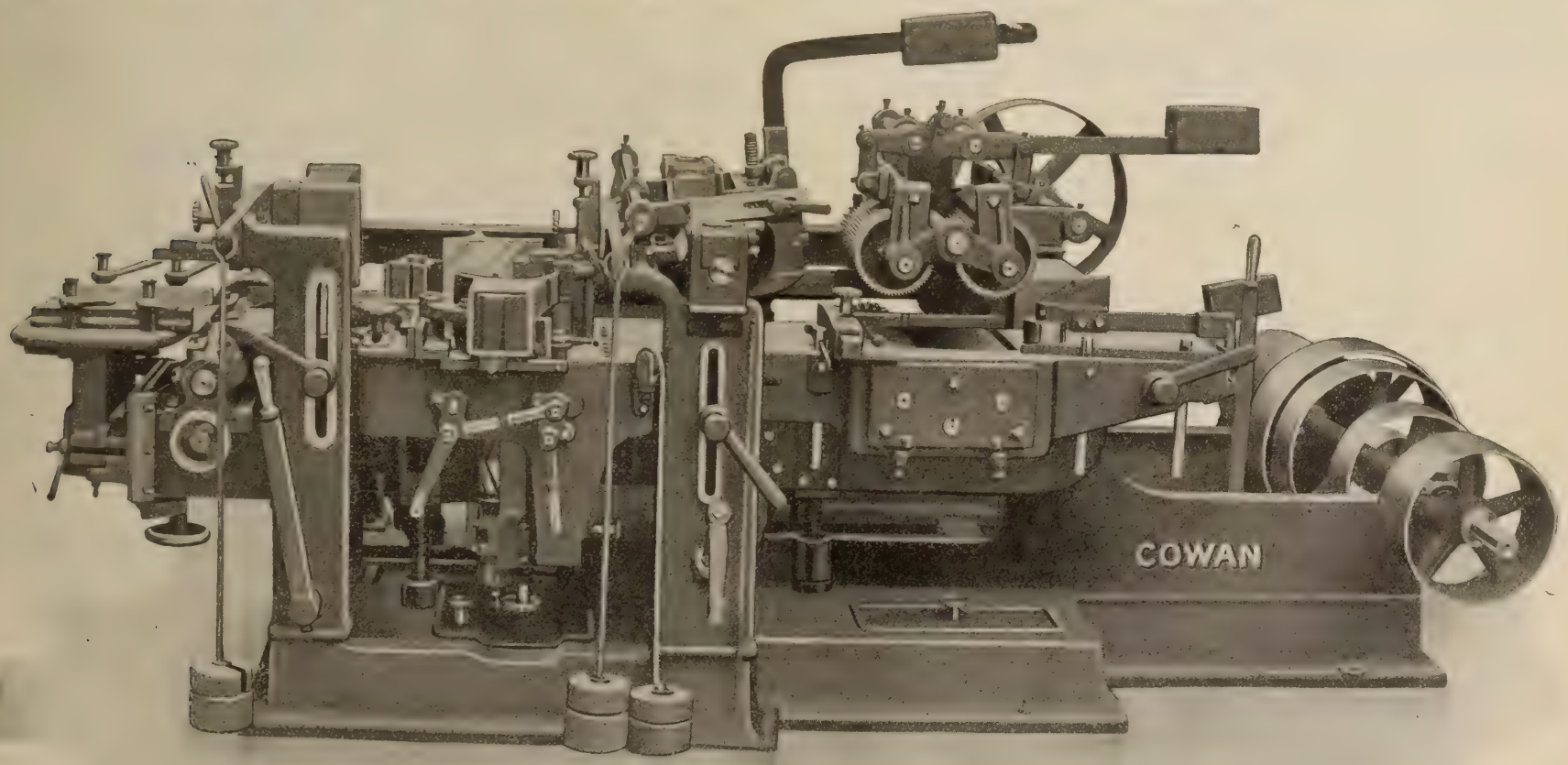

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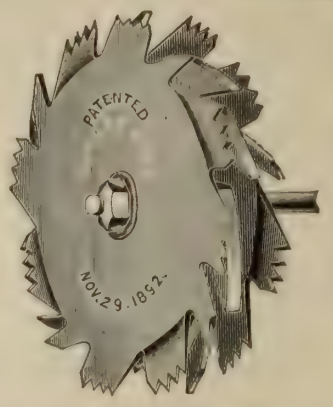

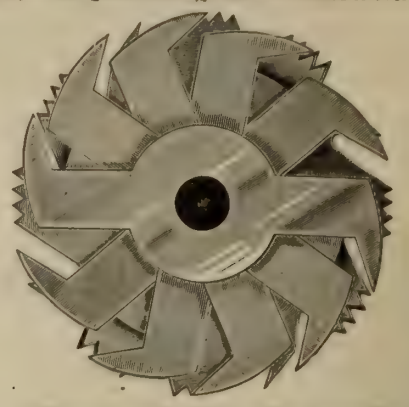

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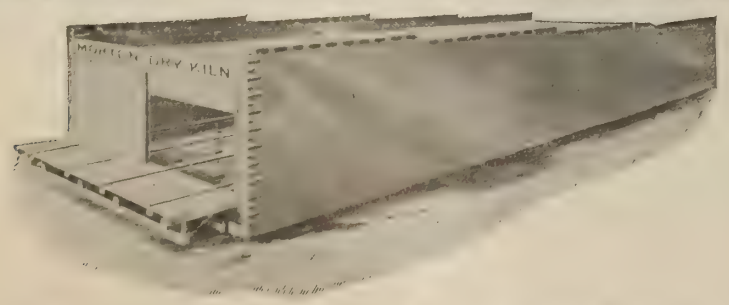

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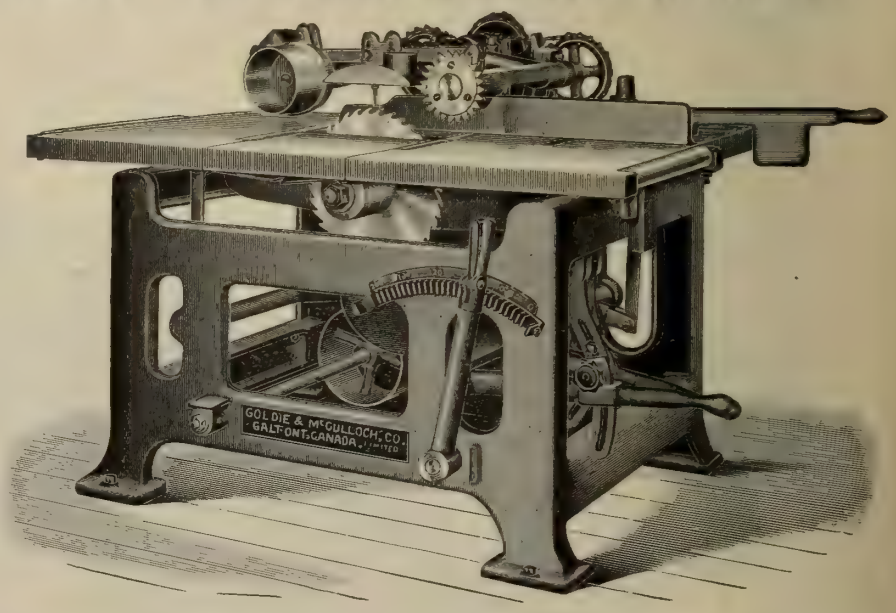

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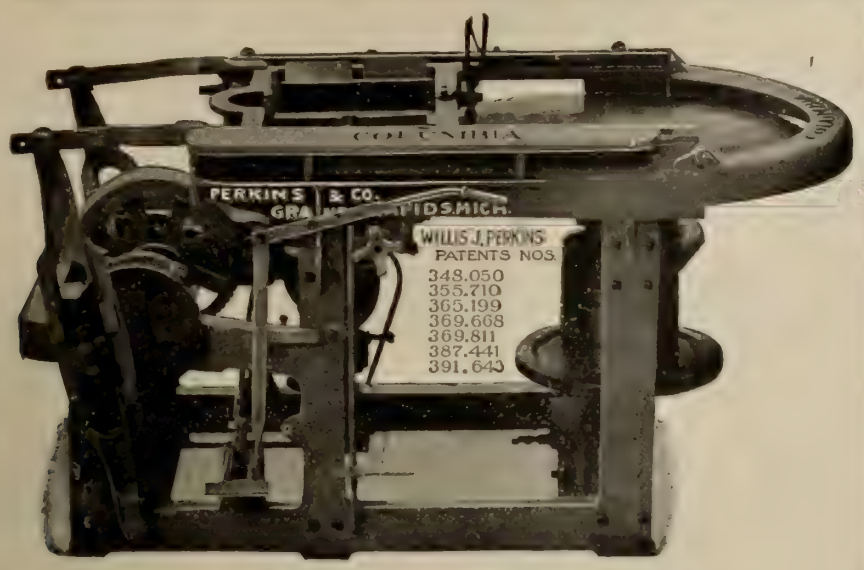

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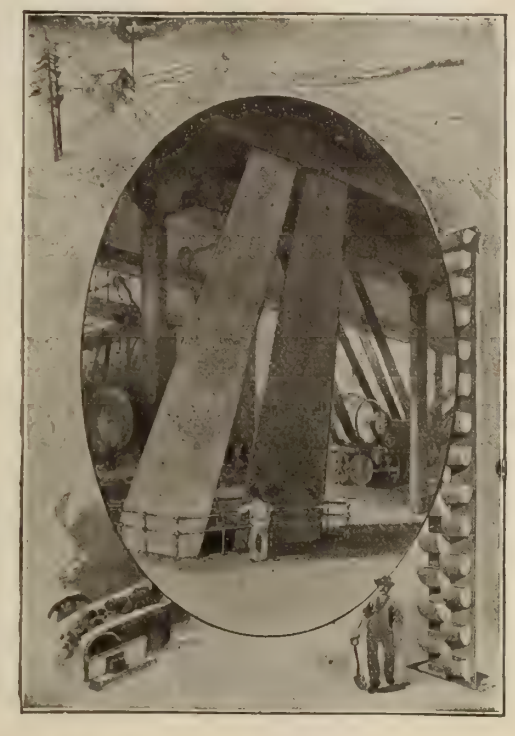

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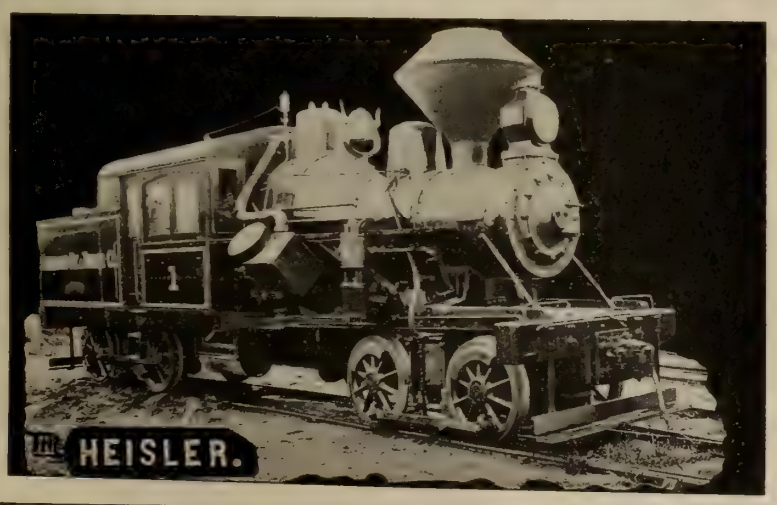

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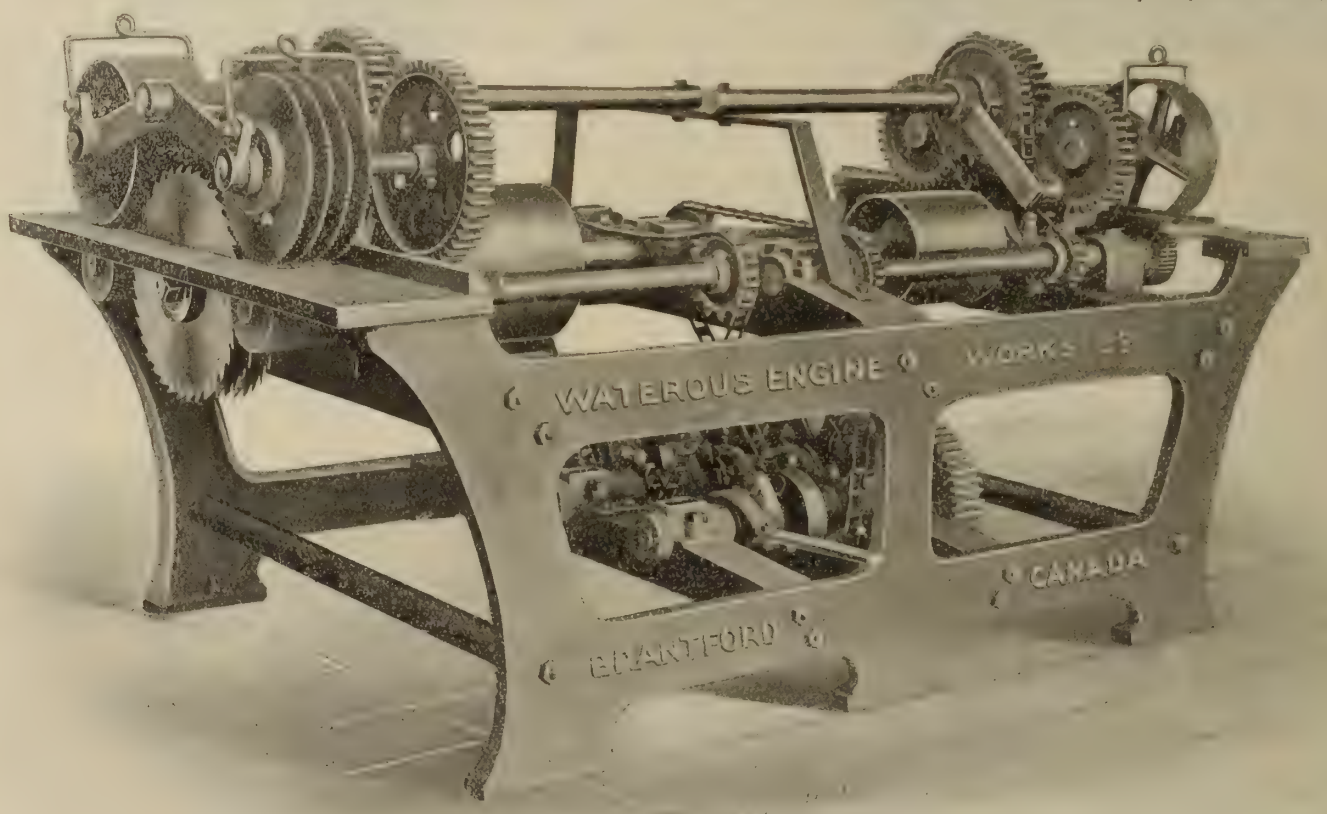

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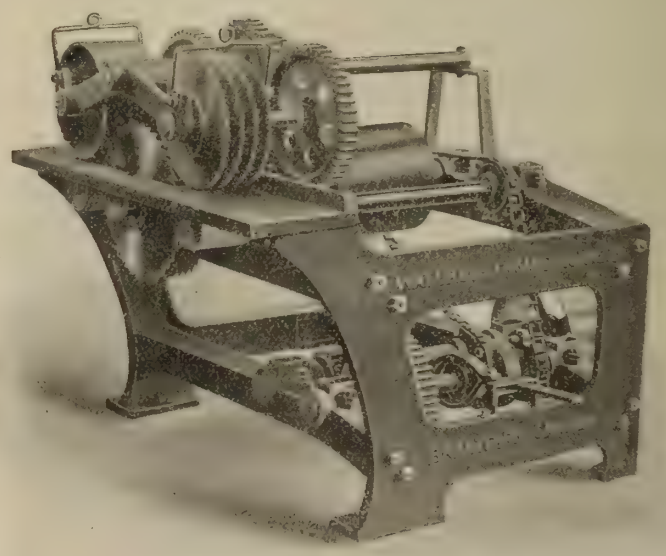

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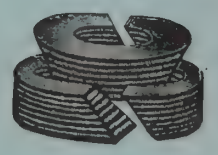

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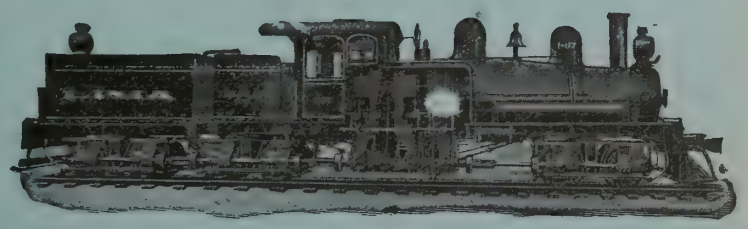

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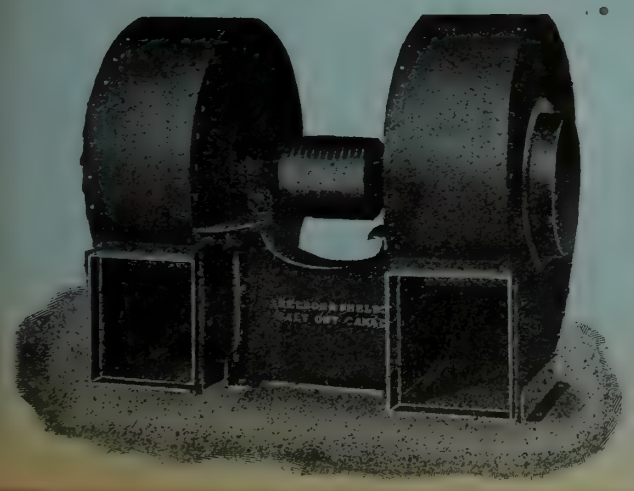

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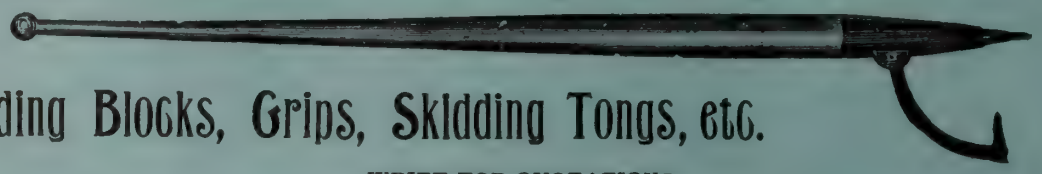

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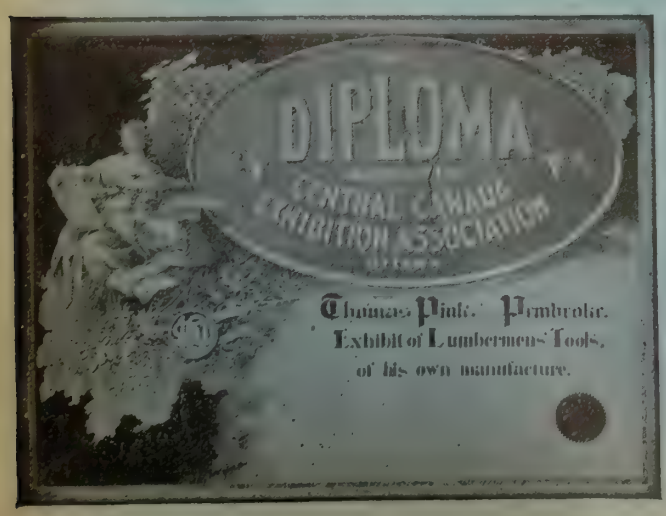

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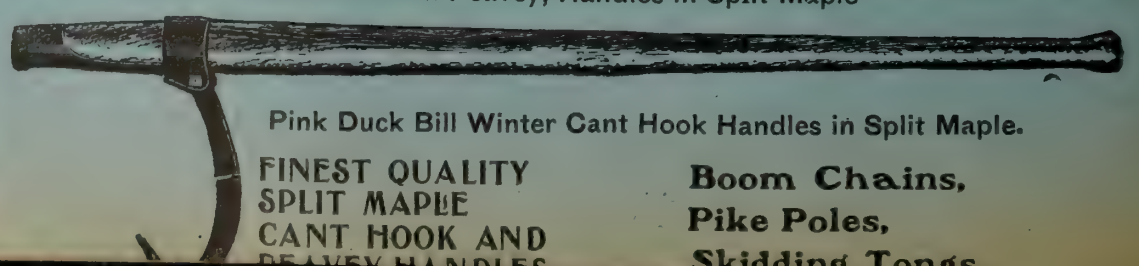

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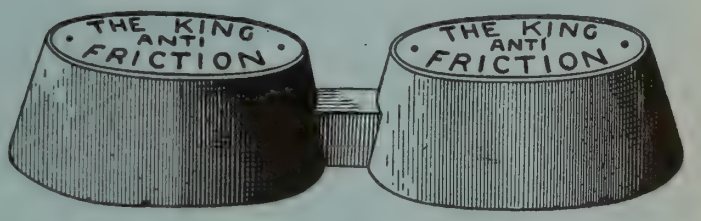

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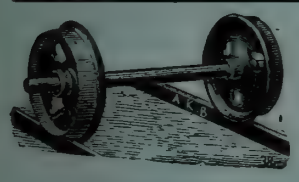

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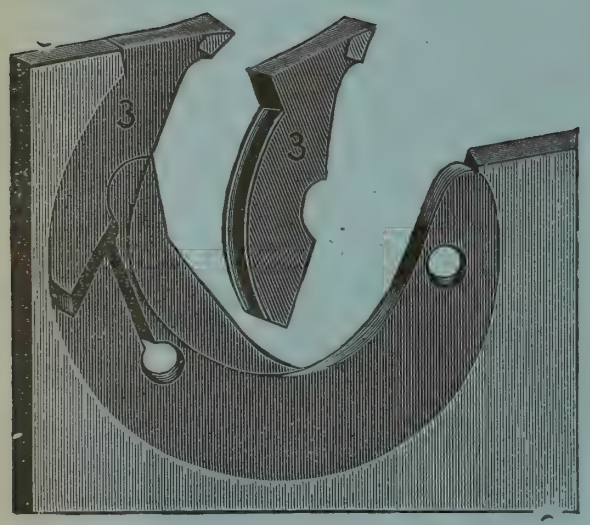

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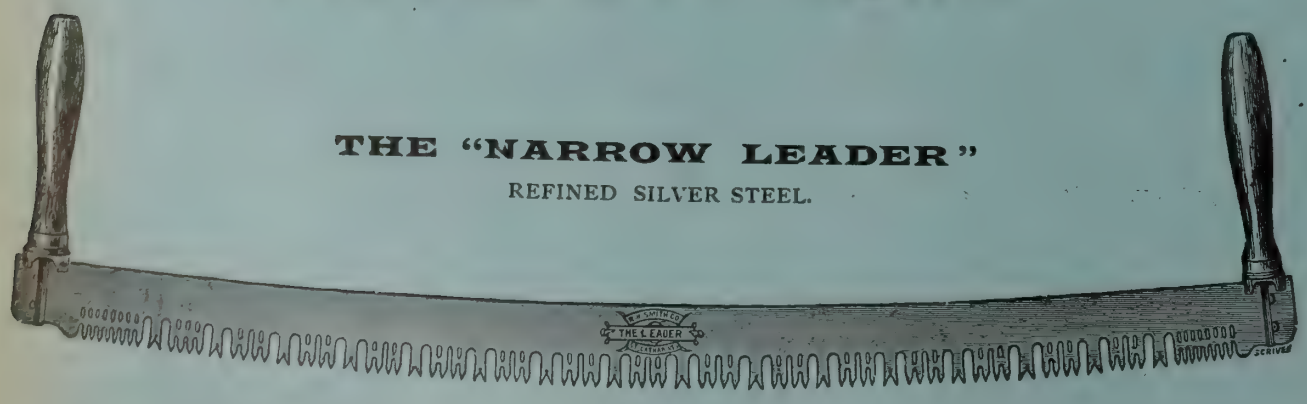

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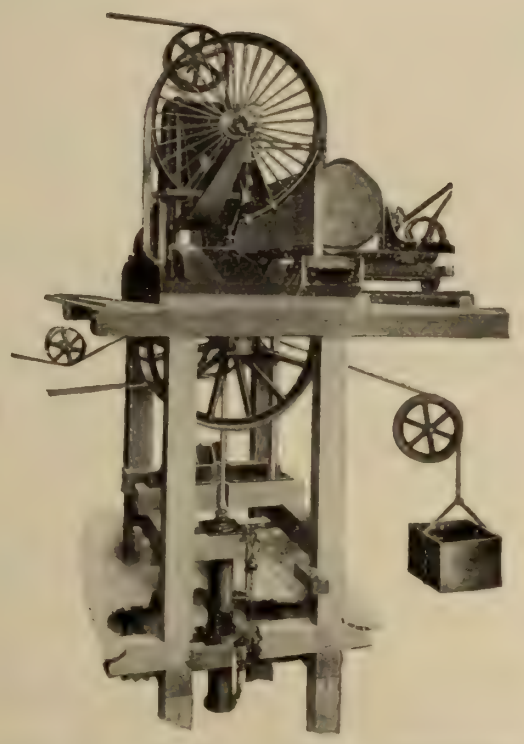

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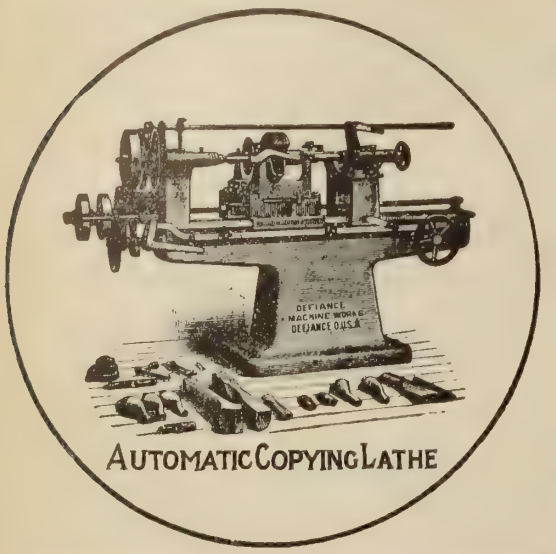

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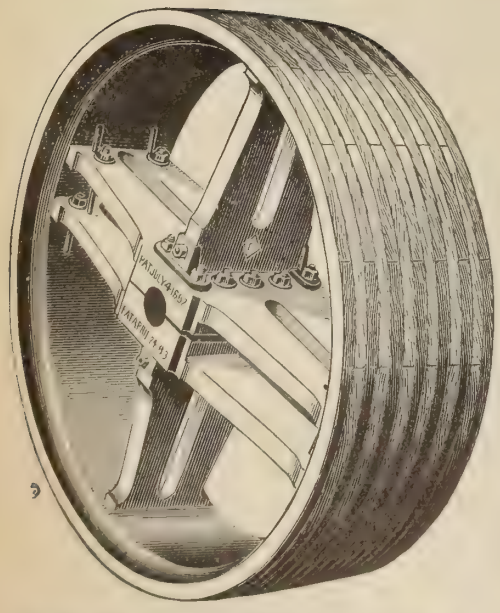

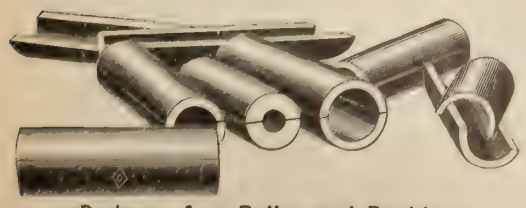
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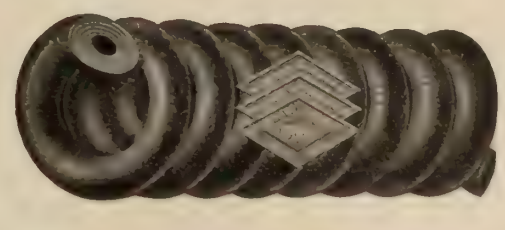

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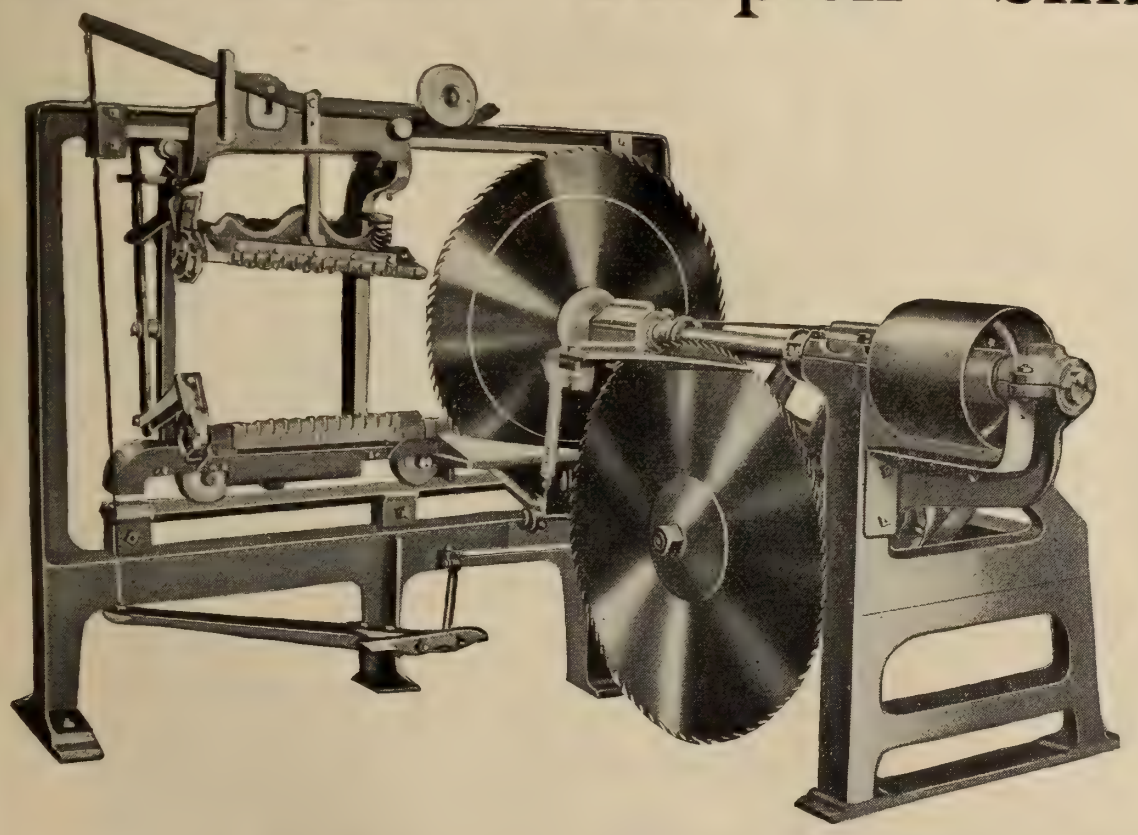
Iron Frame "Simplex" Shingle Machine



IN this, our latest design of Shingle Machine, we have incorporated all the advantages contained in our wood frame "Simplex" and added several improvements.

The arbor has been made heavier and a third bearing added to support it outside the driving pulley. The method of putting lead in the saw arbor has been greatly improved. This is now done by swinging on a centre directly under the saw the whole frame which carries the arbor. Thus the alignment of the bearings is not in any way affected and there will be no danger of hot bearings after the lead has been changed. The change may be made while the machine is running and without stopping the carriage.

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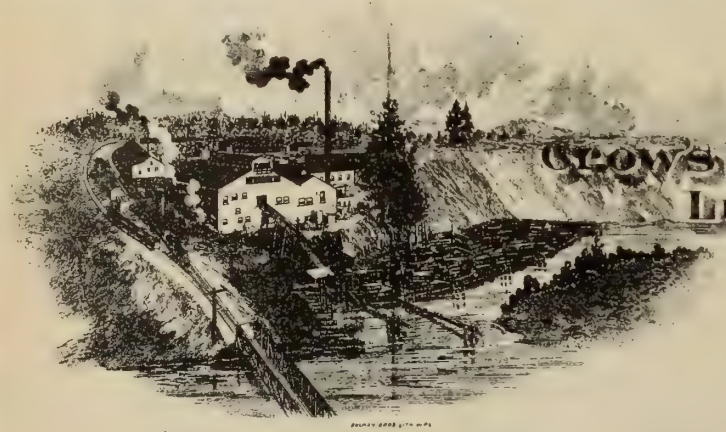

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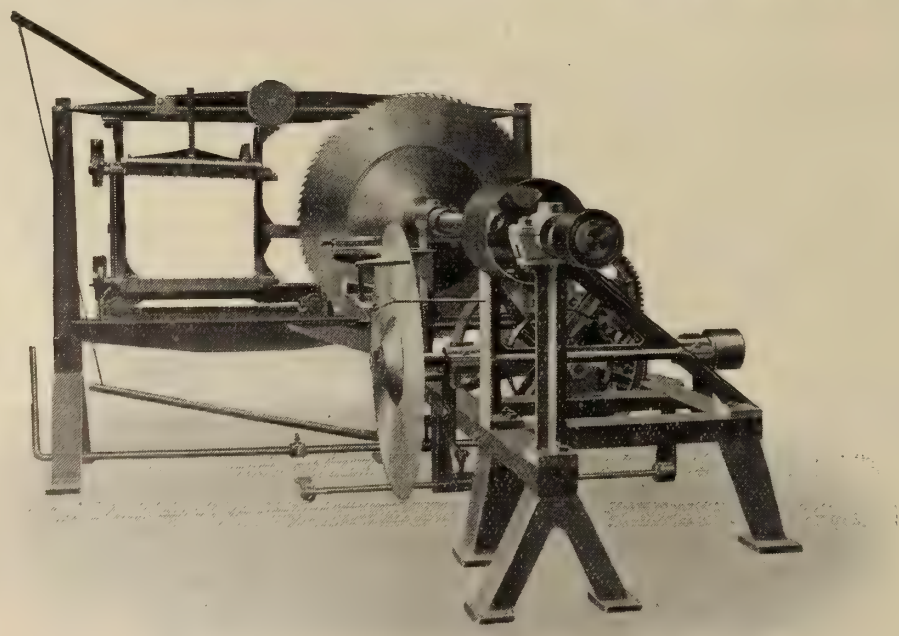

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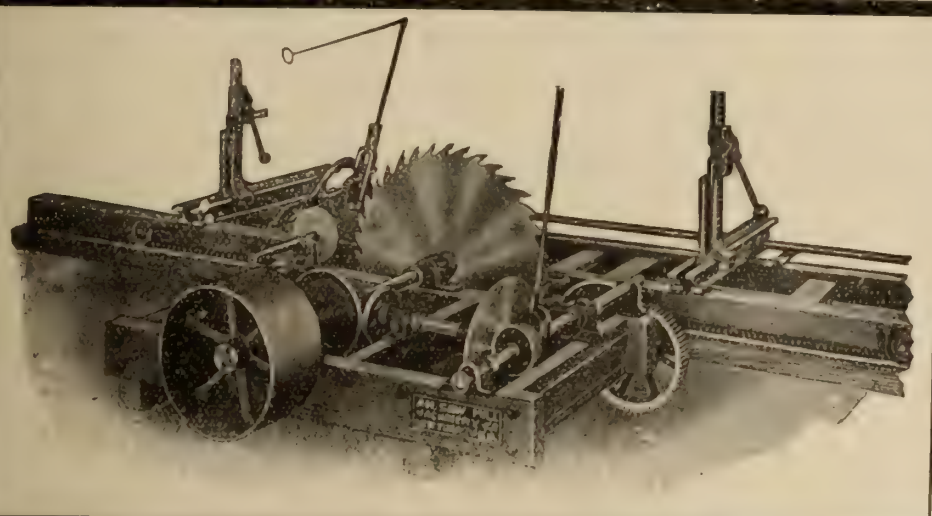

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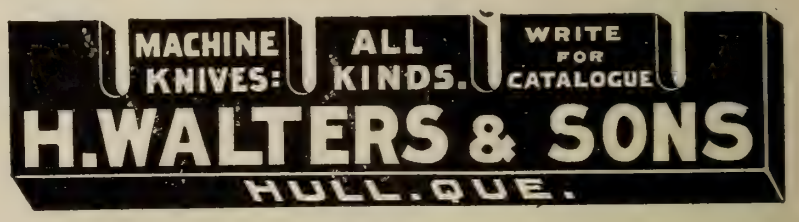

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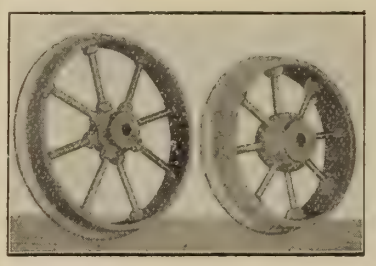

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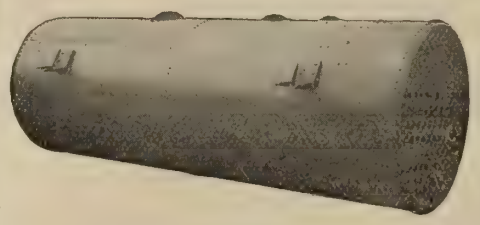

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CANADA LUMBERMAN
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VOLUME XXVIII. NUMBER 6. | TORONTO, MONTREAL — JUNE, 1907 — WINNIPEG, VANCOUVER | TERMS, $1.00 PER YEAR Single Copies, 10 Cents

History of the B. C. Cedar Shingle

An interesting history has attached to the British Columbia red cedar shingle since its introduction into Ontario in 1891. In the summer of that year there were but two mills making shingles in Vancouver. These were the Royal City Mills and G. T. Sclater & Company. In that year David MacLaren and H. Depencier, of Ontario, arrived at the coast and contracted for what was at that time considered a very large order at $2.72½ delivered. The following year Mr. H. H. Spicer, who had been previously representing Sclater & Company, added to his own plant the first hot blast dry kiln used in the province. Mr. Spicer then conceived the idea of introducing the British Columbia shingle into Ontario, and came down to Toronto and interviewed Mr. F. N. Tennant, who still is in business in Toronto. Mr. Tennant at first demurred about handling such an unknown article as the British Columbia shingle then was, and Mr. Spicer proceeded to Boston, where he sold to Shepard, Morse & Company the first British Columbia shingles ever shipped into New England.

On his way back Mr. Spicer called again on Mr. Tennant, and this time sold the latter a carload of shingles and left him some advertising matter, which was sent to various points in Ontario, accompanied by samples of the shingle. The success of this method was pronounced, and orders came in apace. Soon Mr. Tennant had built up a considerable business in British Columbia shingles. Mr. Robert Laidlaw and Mr. John Waldie also joined in the movement, and from that time to this the demand for British Columbia shingles has increased by leaps and bounds.

The price of British Columbia shingles was originally $2.75 per thousand, f.o.b., any point in Ontario, 12½ cents per thousand being the Ontario agent's commission. The market once created, mills for manufacturing shingles commenced to pop up in every direction on the coast, but for a time the demand was so great that it was equal to the expansion of the business. Presently, however, keen competition ruined the trade temporarily, shingles being sold as low as $1 f.o.b. This condition of affairs could not last long, however, and, accordingly, a meeting of the numerous manufacturers was called and the whole question thoroughly discussed. The upshot of the gathering was that all agreed that unless slashing of prices ceased all would be buried under their own overproduction. A means of curtailing production was arranged, and a minimum price agreed upon, which would admit of a bare margin of profit. More competition subsequently entering the field disarranged this understanding, and shingles once more fell to ruinous prices. The scheme was thereupon evolved of having all mills dispose of their product through two selling agencies.

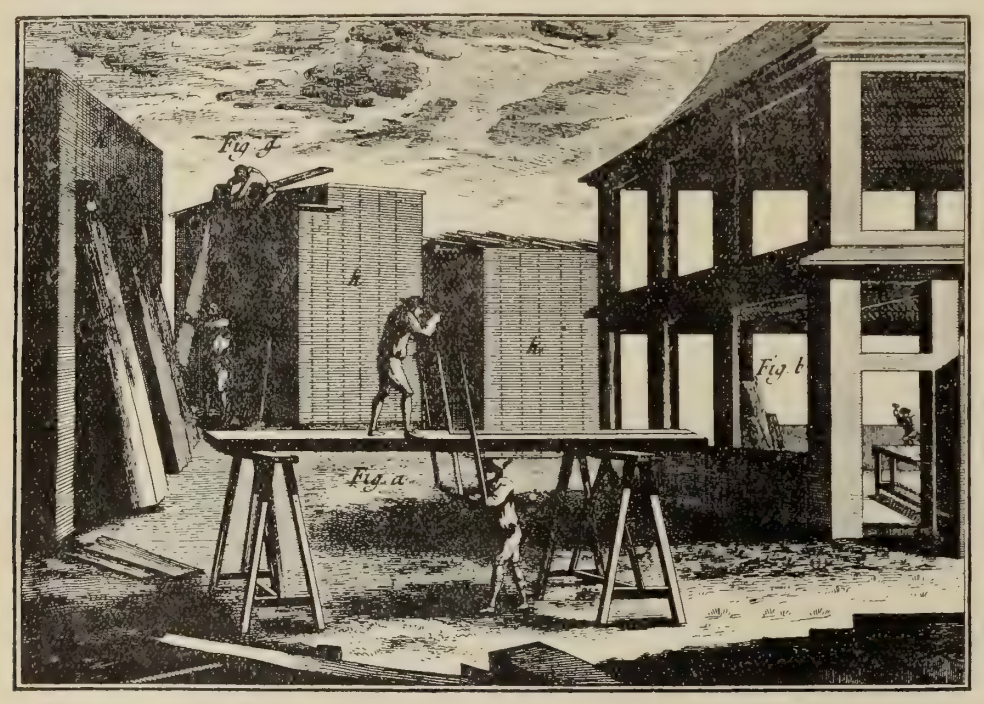
In the fall of 1904 and spring of 1905 shingles sold at $2.25 f.o.b. With the increase in the cost of raw material, this price has since advanced periodically, until, on April 4th, 1907, with the declaration of an advance of 30 cents a thousand, the price is now nominally $2.50 f.o.b., Vancouver, for XXX shingles, while buyers are offering as high as $3.90 for Perfections. In all probability a still further rise will be seen before the present season closes.

THE FIRST SOLID TRAIN LOAD OF SHINGLES SHIPPED EAST FROM BRITISH COLUMBIA. H. H. SPICER & COMPANY, VANCOUVER, SHIPPERS; F. N. TENNANT, TORONTO, CONSIGNEE.

Old and New Ways

By John Phin.

It is a notable fact that while the ancients excelled us in art, architecture, sculpture, etc., they were far, far behind the constructors of the present day in their mechanical methods and appliances, and no more striking instance of this is to be found than in their machinery and methods of getting out lumber. Even as late as a hundred years ago there were no large lumber yards which kept what would now be called a respectable stock of ready-made beams, boards, planks and scantlings. The timber merchants kept their stock in the form of logs, from which their customers selected what they thought would cut up into material suited to their purpose, but in the case of a large structure the first thing the constractor did was to go into the forest, fell the required trees and cut them up into the necessary shapes and sizes. This was no doubt one reason why the construction of large buildings took so much time in those days, for among other causes of delay the timber had to be seasoned as well as cut up, and this took time. To-day the contractor makes out his "bill" of lumber, sends it to a lumber yard, and within a few hours receives the quantities and sizes that he needs, all in well-seasoned material. We have to-day on this continent lumber yards that could on order supply, ready to go into the construction, all the material required for the largest building in Europe.



Before the Saw Mill.
Reproduced from "Encyclopedia of Arts and Trades," Published in French at Paris in 1787.

In those days there were no saw mills such as we have now; the timber was all cut up into boards by hand, and the engraving which we reproduced from a standard French work published in 1787, gives a very clear idea of the old method which gave rise to words and names which are still in use among us, but which are now applied to other things, their very origin having been forgotten by all except a few antiquaries and dictionary-makers.

The reader will observe that the log which is to be cut up is supported by two trestles. In general, however, instead of being supported by trestles, the log rested upon two beams laid across a pit, which was either sunk into a bank or dug in the ground. In this way the log was more easily moved into its place and everything was more solid and free from shake. The saw was held in a rectangular frame of wood, which helped to stiffen it, and it was moved up and down by two men, the one on top being known as the "top sawyer," he being the one who was supposed to have the greatest skill in guiding the saw. This he did along lines marked off on the upper side of the log by a chalk line in the usual manner. The man in the pit, or the "pitman," as he was called, merely furnished the power required to pull the saw, in doing which he brought down a shower of sawdust, from which he had to protect his eyes by covering his face with a veil. In pulling down the saw against the resistance offered by the cutting of the timber, the pitman was aided by the weight of the saw and its frame, and the top sawyer had to raise this weight when he lifted the saw. The whole process will be easily understood from the figure, in which, however, an English-speaking artist would have shown a pit instead of trestles, and then the full meaning of the terms "top sawyer," "pit man" and "saw pit" would have been clear. They are all in common use to-day, but applied in ways which give no clue to their origin. We call a man a "top sawyer" when he is specially skilful in any art, and the word "pitman" is now applied to the connecting rod by which a crank gives its pull, but real pitmen and top sawyers have disappeared along with the saw pit.

Just look at the picture carefully and consider what an advance the saw mill of to-day is over the method in use less than one hundred years ago.—Woodworkers' Review.

THE MANUFACTURE OF EXCELSIOR.

Those interested in the manufacture or use of excelsior packing would have been much interested in visiting the factory established by Mr. J. A. Manning at Owen Sound, Ont. This factory derived its power from a producer gas plant, which was found to be a great saving in the cost of operating, although we are advised the engine used caused the management considerable trouble because it was not constructed simple enough for producer gas. The manager says that engines are built that are satisfactory, and he believes producer gas is the coming power on account of its low cost of production.

The feature that made this plant so interesting and caused it to stand in a class by itself was the machine which made the excelsiod. This material has heretofore been made on machines which have a reciprocating, therefore a very slow motion.

Some years ago Mr. J. A. Manning conceived the idea that it would be possible to build a machine to do this work on a rotary principle. It required years of time and a large expenditure in money to perfect his machine, but he persevered, with the result that he now claims to have a machine that will easily do the work of twenty-five old style machines, is much easier looked after, will turn out any quality of goods desired, saves 50 per cent. of power, and makes a long, clean cut fibre which is free from the objectionable broad shavings made by other machines.

Unfortunately, Mr. Manning's factory was completely destroyed by fire a short time ago. He intends devoting his time to selling his machines and patents instead of rebuilding the factory.

TRADE NOTES.

Allis-Chalmers-Bullock, Limited, have engaged Mr. J. B. Weir as expert saw mill engineer on the Pacific coast. He will have charge of this branch of their business, with headquarters at Vancouver. Mr. Weir has had a long experience in the saw mill business, and is thoroughly familiar with Pacific coast conditions.

The Trusts & Guarantee Company, Limited, liquidators of the William Hamilton Manufacturing Company, of Peterboro', have accepted an offer made by Mr. R. R. Hall to purchase the assets of the latter company at $192,000. This will mean that the business carried on by the William Hamilton Company will be continued.

In order to keep pace with the requirements of their increase in business, the John McDougall Caledonian Iron Works Company, Limited, of Montreal, have opened sales offices at the following places:—Montreal, 82 Sovereign Bank Building; Toronto, 810 Traders Bank Building; Winnipeg, 251 Notre Dame street; Vancouver, 416 Seymour street; Nelson, Josephine street; New Glasgow, N.S., Telephone Building. Their principal products are waterworks equipment and all kinds of hydraulic and mill machinery.

Strength of Timbers*

By Professor Penhallows, McGill University, Montreal.

In designating Douglas fir for commercial purposes, the terms "yellow" and "red," "coarse-grained" and "fine-grained" are used to indicate the various qualities. The "yellow" and "fine-grained" varieties are those which possess the highest value for structural purposes, because, among other reasons, of their great freedom from shakes.

The value of the Douglas fir for structural purposes, because of its freedom from shaking and longitudinal shear, is directly related to the relative volumes of the summer and spring woods in such a way that the lower the ratio, or the greater the tendency to equality between these two parts of the structure, the higher does the value become.

The relative volumes of the spring and summer woods show well-marked variations which have an important bearing upon the strength of material, and also upon the weight of the wood. The strength of material is, however, in no way influenced by the relative dimensions of the spring and summer tracheids (cells).

The tangential fractures produced as a result of seasoning are found to arise immediately external to the dense summer wood and to follow this structure closely, so that a clean, hard surface is presented. An examination of the line of fracture shows that it extends directly across the large open tracheids of the first formed spring wood. This, then, is in no sense a cleavage line, but one of mechanical rupture as the result of unequal contraction in the contiguous layers of spring and summer wood.

If we ask why the coarse-grained woods shake in this manner, while the fine-grained varieties do not, the answer is one which cannot be based upon simple structural variations. In every case the thickness of the tracheid (cell) walls is the same, while there are in other respects no structural variations which would serve to account for their different behavior under conditions of stress or of seasoning.

That coarse-grained woods develop these fractures freely, while the fine-grained woods do not, serves as an indication that these differences depend largely, if not wholly, upon climatic or other conditions of growth, whereby, probably, different volumes of the elements of water enter into the organization of the cell membrane which, in consequence, exhibits various degrees of brittleness or susceptibility to rupture. This view appears to gain support from the importance which lumbermen attach to locality as influencing the quality of the timber. Thus the development of shakes is dependent upon organic peculiarities of the cell-wall and not upon structural differences. The susceptibility to fracture is determined by climatic conditions as influencing the organization of the cell-wall, particularly with respect to the elements of water. The resistance which this wood offers to transverse strain is probably directly related to the relative predominance of the summer wood. The weight per cubic foot probably increases with an increase in volume of the summer wood.

The first series of tests is designed to show the elasticity of the wood and to give the amount of transverse strain that it can stand. The strain here is analogous to the strain on flooring and on bridge timbers; the second series to show the load that the wood would carry. This is analogous to the stress on supporting columns.

Tests for Strength of Wood.

A piece of red oak, measuring 1 in. x 3-4 in. x 14 in., was put into the apparatus for measuring the strain it would stand. When 5,000 pounds was registered an elongation of 1-16 of an inch was noticed. At 8,150 pounds the wood broke, with a long fracture.

In the red oak there are numerous large vessels, and between these lie a number of small vessels forming a small-celled, compact tissue. These wood cells break and shear off between the vessels, giving a long, fibrous fracture. The large vessels are easily visible to the naked eye.

A piece of white maple of the same dimensions and showing a cross grain was then tested. At 5,000 pounds it showed an elongation of 1-16 of an inch. At 8,000 pounds a crackling noise was heard. When 10,800 pounds was registered, the piece fractured.

A piece of white ash of the same dimensions was tested next. At 5,000 pounds it showed an elongation of 5-64 of an inch. At 12,750 pounds it broke. The principal longitudinal fracture here was along the vessels which lie on the line of the summer wood.

The next one was a piece of rock elm, 3-4 in. x 31-32 in. x 14 in. At 5,000 pounds it showed an elongation of 1-32 in. At 9,000 pounds a faint crackling was heard. At 17,000 pounds it showed a fracture, but was not broken and still had the load. Splinters now began to fly. At 22,000 pounds it still had the load, although most of the fibres were broken. It now had a shear in it and so did not break in two, even under this load.

A piece of white pine 3-4 in. x 1 in. x 14 in. broke with a short fracture at 4,400 pounds.

A piece of red pine of the same dimensions broke at 6,250 pounds.

Another set of experiments was now shown which demonstrated the amount of compression that different woods would bear.

A piece of white birch, 2 15-16 in. x 2 15-16 in x 14 in., was put in the apparatus and pressure brought to bear on it. At 40,000 pounds it exhibited a compression of 1-16 in. At 50,000 pounds it showed 3-32 in. compression. At 60,000 pounds it still did not show much change. At 70,000 pounds it began to creak, and at 75,000 it creaked and showed a bending. At 77,000 pounds there was a definite cracking and a bulging at the top. On examination it was seen that a knot at the top had determined the position of the failure.

The next piece was a Douglas fir (Oregon pine), which showed star shakes on the face. The dimensions were 3 in. x 3 in. x 18 1-2 in. At 40,000 pounds it was shortened 1-32 in. At 50,000 pounds it was shortened 3-64 in. At 70,000 pounds it showed a slight bending to the right. At 85,000 pounds it was shortened 3-32 in. At 88,000 pounds the wood was crushed into itself.

The next was a piece of white pine, 2 15-16 in. x 2 31-32 in. x 18 3-4 in. At 40,000 pounds it was shortened 1-64 in. At 52,000 pounds it was beginning to fail, telescoping right into itself. The failure showed right in the centre.

A piece of yellow pine, 18 3-4 in. x 2 15-16 in. x 2 15-16 in., was next tested. At 40,000 pounds it was compressed 1-32 in. At 46,000 pounds it showed signs of failing.

Next was a piece of red oak, which had some shakes in it. It was 3 in. x 3 in. x 18 in. At 40,000 pounds it was compressed 1-64 in. At 50,000 pounds it was compressed a little less than 1-32 in. At 60,000 pounds it showed a compression of very nearly 3-64 in. At 68,000 pounds it began to fail

A piece of white oak, 16 1-2 in. x 3 in. x 3 in., which showed drying cracks, was next tested. At 40,000 pounds it was shortened 1-32 in. At 80,000 pounds it exhibited a failing along a longitudinal line showing fibres. The failure was along the line of one of the drying cracks, leaving the rest of the wood intact.

A piece of white ash, 18 1-4 in. x 3 in. x 3 in., was next tried. At 40,000 pounds no sensible compression was evident. At 50,000 pounds it was compressed 1-32 in. At 60,000 pounds it was compressed. 1-16 in. At 70,000 pounds it was compressed 3-32 in. At 77,000 pounds it showed a failure and was giving right across.

A piece of soft maple, 18 in. x 2 3-4 in. x 2 7-8 in., was then tested. At 40,000 pounds it exhibited a hardly perceptible compression. At 50,000 pounds it was compressed 1-64 in. At 60,000 pounds it was compressed 1-32 in. At 70,000 pounds it was compressed 1-16 in. At 71,000 pounds it began to give in two places.

A piece of red oak, with a number of knots and shakes, was then tried to show the comparison with the piece tested before. At 34,000 pounds it began to make a slight noise. At 40,000 pounds it was compressed 1-32 in. At 52,000 pounds it began to break. A knot determined the break.

A piece of Douglas fir, 7 3-16 in. x 3 in. x 3 in. of finer grain than the first one tested, was now tried. At 60,000 pounds it showed no sign of breaking. At 80,000 pounds it still showed no sign of either breaking or giving. At 90,000 pounds it emitted faint cracking sounds. At 92,000 pounds it showed a failing right in the middle. An interesting feature here was that the great pressure produced a perceptible rise in temperature at the place of fracture, the heat bringing out the odor of the wood.

A piece of red oak, 3 in. x 3 in. x 36 in., was now tested. At 50,000 pounds it began to give, and soon showed a bending to the left. At 54,000 pounds it broke along a drying crack.

*Lecture delivered before the National History Society of Montreal, and published by permission.

FIRST METHODS OF FORESTRY

H. R. MACMILLAN, B.S.C., YALE FOREST SCHOOL.*

So much more has been written concerning the why than the how of forestry, and so many reasons have been advanced for the protection of forests without an accompanying explanation of this protection, that a short general discussion of the first steps taken in the establishment of a forest policy in a country previously without one seems to be in order.

For our examples it is better to go to the United States than to Europe, since their problems are more nearly like ours, and since our solutions, owing to similarity in lumbering methods, labor conditions, and market facilities, must closely resemble those of our southern neighbor.

Our forests, because of their widespread extent, are exposed to very many ravages and to much mismanagement, and so little is known concerning them that the fundamental operations upon which a forestry policy may be founded, elaborated and executed, may be separated into three main divisions, all necessary and inter-dependent—legislation, investigation, and management.

The first and most important, legislation, need only be mentioned here. It comprises the constitution of an executive officer or commissioner having full control of the provincial forest lands, their government, use, and administration, with the power to employ technically qualified men as administrators and advisers, as well as with the framing of such laws as will guard against trespass and fire, and will furnish the necessary machinery for enforcement. This legislation is all forestry, and is one of the most essential parts of a forester's business, and upon it has depended the success or failure of forest policies in different American States.

The question of investigation, however, is one less generally understood, though it is the basis of forestry. Investigation may be of two kinds, that of an exploratory nature, chiefly concerned with exploration; and that carried on in connection with mechanical and chemical laboratories, manufacturing plants, and railroads.

Of the exploratory studies, one of the first must be to differentiate the agricultural from the non-agricultural lands, and the protective from the non-protective forests. Those which are not agricultural because of their poor soil, broken character, or rocky nature, and those which are protective because of their influence on water sheds and situation at the head waters of streams important to agriculture or commerce, should be retained in the possession of the state as forest reserves, to be managed conservatively by the state, so as to produce a yield of timber which will support a permanent timber industry, not one of mushroom growth and short duration, as was that of the Lake States.

In order to do this intelligently, the land and timber must be studied carefully. This work is usually done by a small party under the direction of a forester. The method of procedure in a mixed forest is to run survey strips through the forest at regular intervals which constitute in area about two to five per cent. of the stand, and on these strips all mature and immature trees are counted and measured, and, where ties, poles or logs are the customary local product, they also are counted and entered upon the tally sheets. After a little experience the work can be done quite quickly, varying with the amount of detail required. At the same time the topography is carefully mapped, drainage, slopes, swamps, ridges, and all features which can affect lumbering are noted, so that when the survey is complete a relief map may be presented, according to which local operations can be planned, camps and trails located.

If the timber varies but little in composition, as does the spruce of the north woods here, and may be differentiated into three or four types, operations are simplified. The chief of the party, who must have had sufficient woods' experience to have matured a critical judgment, selects a large number of sample acres scattered over the tract characteristic of the stand of each type, and on these sample acres all trees are carefully counted and measured as before.

Whether the survey is conducted on the strip or sample acre method, average trees of the different merchantable species are cut down and their rate of growth ascertained by counting the ages at different cross sections. In other words, a stem analysis is made of a sufficiently large number of carefully selected trees to furnish accurate evidence as to the rate of growth and development of different species under different conditions and in different situations.

At the same time existing roads and trails are surveyed and mapped, studies are made of reproduction, danger from fire, grazing, and insect attack, and of the best means of preventing these injuries. Market and transportation facilities are carefully investigated, and often at the suggestion of mill men attention is paid to waste in logging and at the mill with suggestions as to the means of reducing it.

The result of these investigations is embodied in a working plan, which is accompanied by a map showing the distribution and stand of timber, roads and physical features affecting logging. In some instances, notably in Maine, lumbermen have had these maps prepared as relief models of townships, vividly protraying the character of their operations. The working plan itself shows the amount, character and accessibility of the timber in each natural division of the operation, determines the lumber product obtainable if cut to different diameter limits, contains tables showing the rate of growth in volume and value, and yield tables showing how much may be cut off each year without endangering future supply, as well as telling how soon the lumberman may come back and what he may expect to count in getting at that time if he were to cut to a certain diameter limit now. There are also outlined in the working plan precautions to be observed in cutting such as are necessary to procure a reproduction of certain valuable species to prevent waste or windfall or other dangerous influences.

That these working plans are meeting with favor is testified by the number of lumber companies all over the United States who are asking to have them made. An example which may be quoted is that of a well-known firm, the Great Northern Paper Company, who had a working plan made for 275,000 acres in North Maine. One-half of this was done in three and a half months by a force of thirty-two men. The main object was to provide for a supply of spruce reproduction after cutting and to decrease the amount of balsam. Detailed instructions for lumbering were given, and, so far as spruce reproduction was concerned, they were a success. I spent three weeks last Christmas on land lumbered according to these instructions, and found sufficient reproduction already.

Another investigation, of importance to lumbermen particularly is that known as commercial tree studies. These constitute investigations of adaptability of important trees to management for commercial purposes and include determination of the lumber product in different diameters, the rate of growth in different districts, present supply, and management necessary to procure future reproduction, uses of timber at present, its possible uses, and its markets.

The study of the last, the uses of the timber, has been one which is interesting the trade generally. In connection with various mechanical and chemical laboratories, mills, factories, and railroads, experiments are being carried on to test the strength, durability and other important qualities of wood not usually considered mechantable, and to find what preservatives can be used advantageously and economically. So much remains to be done in connection with the many different industries using and depending upon lumber that only a small proportion of the possible results have been obtained. Yet, already red gum has come into the market as a valuable box timber. Other species just as fit have been substituted where more valuable ones had been previously used.

Railroad and telephone companies have taken up the question of timber preservatives extensively, and as a result of the study of by-products there are a great number of distilleries established and being established in the different states in the hardwood belt.

In Boston a wood pulp laboratory has been established, which is now making paper from almost everything, and doubtless as prices continue to soar many other schemes to utilize hitherto unvalued species will be developed, and the lumberman will be enabled to cut more timber off his land and thus reap larger profits.

It is in the organization and management of forest lands that forestry most intimately touches national life in general and lumbering in particular. To insure that forests will be maintained when necessary as a protection, and that a sufficient supply of timber will always be present to support home builders and a flourishing lumber industry, it is necessary to protect it from fire and rationally dispose of it as soon as it is mature, or as soon as it can be spared.

Up to the present date fire protection has been the chief idea of the United States, and as fire protection must be one of the first steps for forestry preservation in New Brunswick, it may be interesting to note their methods.

Each reserve is managed as a separate unit from the central office at Washington, and the forestry officials, supervisors, rangers, and guards, though given wide authority with corresponding responsibility, are directed by a code of instructions formulated by the head office. All officials excepting the forest guards are civil service employes, and are protected from discharge upon any cause, except gross neglect or inefficiency, by the provisions of the Civil Service Act. They are paid from $720 per year, to $2,500 in the case of supervisors.

The supervisor is responsible for the patrol and protection of his reserve, and he is expecteed to devise means best adapted to protect it. Wherever circumstances demand it, he is authorized to hire additional force, purchase materials and supplies, and to provide for the transportation of such, incurring expenditure up to $300 for the extinction of fire. If a greater sum is needed, the supervisor telegraphs to the head office for authority.

The rangers are generally employed permanently, though the force may be decreased during the non-dangerous season. They are required to be men of woods' experience, to live on the reserves, to furnish their own horses, or in country where necessary their own boats, and supply a camp equipment. The rangers report monthly to supervisors concerning all fires occuring in their districts. These reports cover the location of the fire, damage done, probable cause, and all particulars of discovery and methods, time and means of extinction. At the end of the year the supervisors present an annual fire report for each district to the head office.

Since this system of protection has been adopted the area of land under protection has been doubled, yet the area annually burned over has been reduced by one-half. Only 16 acres in each 10,000 were burned over in 1905, and the total cost of extra labor and supplies for fighting fires on 92,000,000 acres was only $12,500.

The total amount of timber destroyed by fire on an area of 92,000,000 acres under such system of protection was only 152,000,000 board feet, while on a total area of 12,000,000 acres New Brunswick in 1903 lost 184,000,000 board feet; or in the United

* Paper read at the New Brunswick Forestry Convention.

States reserve lands 165 board feet were burned for each 100 acres. In New Brunswick forest lands 1,525 board feet were burned for each 100 acres. This extra 1,300 feet would have paid for quite a bit of fire protection.

The system followed is that of watching for fire instead of waiting for it. A constant lookout is kept during the dangerous season from commanding points, and the reserves are patrolled as effectively as possible. Roads, trails and fire lines are built on ridges, or wherever they will be most effective in checking fire, and also serve as a quick means of communication. Telephone lines are constructed to facilitate the summoning of assistance. In the Maine spruce woods lookout stations have been established on high hills, where they command a view over a township or more, and during the dry season men are kept constantly on the watch in each tower. All are connected by telephone, and each is equipped with a range finder, so that when fire is discovered by communicating with one another they are able to locate it definitely and direct as well as summon help. The equipment is supplied by the lumbermen, and the wages of the watchmen are paid by the state. During the first year of their service they proved so satisfactory that they are being increased this year.

The same force on the reserve which constitute fire protection is also responsible for safety from trespass.

The vital point of the whole scheme, and the one about which the lumbermen were the most skeptical, was the success and business-like disposal of the timber by the Government. Here was where irrational methods and failure were prophesied. But, possibly spurred on by these prophesies, an organization was developed which is simple, satisfactory for the consumers, and efficient for the nation.

The supervisor acts as business manager of the reserve, and has at present as his adviser a technical assistant, who is a trained forester, and also is responsible for the study of reserve conditions and the preparing of working plans.

All timber on forest reserves which can be cut safely and for which there is actual need, is for sale and always open to applications for purchase. All dead timber is for sale, and sometimes given away. Green timber is not for sale, except where its removal reduces the timber supply below a point of safety, or seriously affects streams.

The rules governing the purchase of timber are simple and effective. They are framed so as to give the resident consumer, struggling mill owner, and wealthy would-be monopolist, all equal chances, except that small applications are considered first. Applications are made to the local officer in charge, who has power to execute on the ground sales up to the stumpage value of $20. If the sale is larger the application is immediately forwarded to the head office which advertises the sale. All bids are made by sealed tender direct to the forest service, and the price absolutely fixed by the highest bid. If the original applicant should wish to begin cutting immediately, he may do so upon paying in advance a price fixed by the forest service and engaging to pay the amount net for the highest bid. In this way delay is avoided and a company may begin to cut in a few days after making the application. Speculation is prevented by a provision requiring that timber be removed within a certain time, and when a contract extends over a number of years a proportionate amount of timber must be removed each year. No contract is made for a longer period than five years.

All timber is cut according to regulations laid down by the forest service after study made on the spot by technical assistants, and in no case are these regulations so onerous as to cause any hesitation on the part of the lumbermen. Since this system of timber sales has been introduced the number of licenses granted and quantity of timber cut has been greatly increased, and the forest has been left in much better condition by its removal.

A well-known case is that of the Minnesota reserve, where five per cent. of the pine were left standing for seed trees, and the brush was all burned. This measure was introduced in the face of much opposition, but has since proved feasible and has exploded the fallacy that pine won't grow on the same ground twice. In this instance, as in all others, the object has been to remove the mature timber and to accomplish reforestration by natural means. The brush from 125,000,000 feet of red and white pine was burned at a cost running from 15 cents to 25 cents per thousand feet. This expense approximates that incurred by the employment of an extra swamper for each cutting crew, and the piling facilitates operations by permitting the teams to move around more easily. The ground covered by the fire in burning the brush in no case exceeded 2 to 7 per cent. of the total area. It is expected from the results of this experiment that as soon as the habits of different species are fully known and understood such schemes may be introduced in lumbering, so that a new stand of any desired species may be secured by natural reproduction, and that actual tree planting will play a very small part in the business of forestry. Where necessary, however, on reserves which either have not enough timber, or which are covered with undesirable species, nurseries are being established under the care of the local rangers, and planting is being gradually done under the direction of the supervisors.

That such a sensible and business-like management of the reserves is a good investment is proven by the fact that though the staff of the administration is increasing and expenses are increasing, the forest service is asking for a smaller appropriation this year than last, and has made a definite promise that in five years, in spite of many new projects requiring increased expenditure, it will be self-supporting and will have ambitions to become revenue-producing.

I have only given a skeleton of the methods at present practiced on this continent under the name of forestry, with a very faint conception of the results to be obtained and with the hope that upon her magnificent unalienated forest areas New Brunswick, profiting by the example which she has so near at hand, will build up a forestry policy which will be so statesmanlike and so successful as to excite the emulation of the other Canadian provinces and of the Government of the Dominion itself.

THE SMALL MILL CIRCULAR.

By E. H. Newton.

Assuming that we are running a small mill, we will consider the circular saw and its peculiarities, for, next to power, this is the most necessary adjunct to the small mill—and is often treated to such abuses as would make a fellow wonder how much it is capable of standing. The purpose for which the circular saw is made is to saw lumber—at least this is the general use to which it is put. It may, however, be used to saw almost any material, even to quite hard steel, when specially made and tempered for this purpose, but the circular saw in common use in saw mills is the saw which we have under consideration. We find this saw in all manner of shapes and conditions. Now, there is no getting around the fact that to get best results from a saw it must be kept in the best condition, and yet how many do we find handling saws who have not the knowledge necessary to do this! In the small mills the saws are not usually crowded as they are in the larger mills, and if they are properly fitted and handled, there can be but one result, and that satisfactory. To try to run a saw with several of the teeth broken out, and those that are left of various lengths, with spring set and all manner of shapes, must be trying on the patience of the operator, and means slow and miserable death to what might be success.

Assuming that the saw is reasonably level and the tension fair—that is to say, speaking to the uninitiated, that there are no lumps on the side of the saw to rub against the side of the cut, and that it has sufficient tension that it will not wobble all over, but will run steadily when up to its speed—if it has proper shape and length to the teeth, a nicely swaged and side-dressed point, so that every tooth is of exactly the same length and width, and a good sharp corner, a little wider at the extreme point and narrower back from the point, and it has just enough lead to clear the centre of the saw as the log passes it, and the carriage is right and the track straight and level, it is just as natural for that saw to do good work as it is for a duck to swim.

The teeth should be of sufficient length, and the gullet large enough to take care of the sawdust. This can best be determined by the amount of feed carried and the kind of lumber to be sawed. The throat, or gullet, should never be left square, as is sometimes done when the saw is fitted by hand, for this is not only a good place for cracks to start, but in such a throat the sawdust will stick and the results are never satisfactory. The man who is trying to run a mill and does not furnish an emery grinder for gumming saws, or a Mixter patent burr gummer, is certainly not working to his own best interests and cannot hope to obtain the best results.

The teeth should have good clearance on the back, for easy and fast cutting, and should be given as much hook as will leave sufficient strength to them. When this is done, it will be found that the front of the teeth will line to about one-third the size of the saw; or, for instance, if the saw is 60 in. diameter and a circle 20 in. diameter were drawn on a radius of 10 in. from the centre of the saw, the teeth should line to this circle. Some sawyers like more hook than this, and some use less, but generally this rule is found to be quite satisfactory.

In speaking of the width of the points of the teeth above, I do not wish to be misunderstood. While I have stated that the teeth must be all swaged out to the same width, this might be done and yet the work be far from being perfect, unless the points of the teeth all follow in exactly the same line. This end can be attained either in the swaging and dressing, or by springing the teeth after they have been swaged, but whichever way it is done, both sides of the teeth should be exactly the same and should be tested by a gauge. In speaking of the full swage I do not mean to say that a saw must be run with full swage in order to give good results, for I have often run them with half swage with most satisfactory results. If, however, the facilities are at hand to enable me to give my saw a full swage, I certainly would not do otherwise. First, last and all the time, my friend, be sure that your saw is round.—The Woodworker.

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LOG SCALING RULES.

It is scarcely to be expected that a log scaling rule will ever be compiled which will give universal satisfaction and be accepted by the lumber trade without question. Conditions change, necessitating new ways of meeting these conditions. The Doyle rule, so long used in Ontario, is still recognized as the standard, but there is a disposition to give greater consideration to the use of the Scribner rule. It is not now unusual to have the latter rule accepted as the basis of measurement in log transactions, the seller advancing the argument that it more nearly represents the actual quantity of merchantable lumber in a log.

In British Columbia, too, the question of the most equitable log rule has lately received attention, an amendment to the Timber Measurement Act having been passed legalizing the Doyle rule for logs of all dimensions cut in the territory east of the Cascades, and west of that range of mountains it may be made to apply to logs of varying dimensions at the will of the supervisor of scalers, but the intention is that it shall apply only to logs of comparatively small diameter. At present the Doyle scale is much, if not entirely, in use to the east of the Cascades, where the average timber is much less in diameter than that which grows to the west of that mountain range. On the coast the British Columbia log scale prevails for the measurement of timber.

The Doyle rule, as is well known, calls for a measurement which large logs will scarcely meet, while in the case of small logs the contents might show an over-run. On the ground of this assumed over-run, the rule has been criticized in Ontario. Taking a sixteen-foot log for the purpose of comparison, it will be found that a log twelve inches in diameter gives, according to the Doyle rule, 64 feet board measure, and by the British Columbia rule 84 feet. The Doyle rule is less than the British Columbia rule until a diameter of twenty-two inches is reached, when it begins to show an increase. For a log forty inches in diameter the Doyle rule gives 1,296 feet and the British Columbia rule 1,129 feet. It will be seen, therefore, that the adoption of the Doyle scale on the coast of British Columbia, where the logs are large, would somewhat disturb the logging industry. The advantage would lie with the logger and the Government, the former receiving, perhaps, a larger measurement than actually exists, and the latter an increased royalty as the result of this higher scale. It is quite probable, therefore, that the application of the Doyle rule on the British Columbia coast will be confined to small logs.

BIG CROPS AND PROSPERITY NOT SYNONYMOUS.

As the accumulated difficulties of the past winter are gradually clearing away from the financial and commercial horizon in the Canadian West, one or two lessons of more than passing imporance, that have been thereby presented to the public mind, are receiving well-merited attention. It has been stated in a recent issue of a Western publication that more than one town has, through lavish and unwise expenditure, brought itself to the verge of bankruptcy. Edmonton, it is said, is at the present time spending money at the rate of $25,000 a week, making an annual expenditure of nearly $1,500,000. The astounding feature of this state of affairs is that the annual collectable taxes in that town is at present less than $100,000. In other words, the city is exceeding its revenues thirteen times. The same is true of Winnipeg, and no less true individually of a great part of the population. It is generally admitted, and the present tightness of money goes to prove the fact, that the West is spending all the time a great deal more than the people are receiving from their grain and stock. Mr. Byron E. Walker, president of the Bank of Commerce, is reported to have said that "if there is not at least a marginal contraction in the scope of improvement of all kinds from settlers' houses to railway building, we cannot but expect that next fall we shall have a recurrence of the money tightness of this past winter, except in so far as the trouble this winter was caused by the tie-up of the grain."

That the West is alarmed goes without saying. In the Winnipeg Stock Exchange options on wheat are being followed with feverish interest. What the sudden rise in this commodity will mean to the Western farmer remains to be seen. That it will benefit him immensely is the general opinion, although it is a debatable question whether the present price will be maintained, or whether the market will be flooded. At present it is estimated that there are about 15,000,000 bushels of grain in the country, nearly two-thirds of which is stored in elevators. The grain that is still in the farmers' hands is reckoned at from 5,000,000 to 7,000,000 bushels, exclusive of that for seeding purposes. It is probable that a great number will take advantage of the opportunity and turn their holdings into ready cash, while others, of a more speculative turn of mind, will probably try to force the highest price possible.

The large quantities of wheat, much of which is already being rushed forward to deep water, represent a probable value of from $40,000,000 to $50,000,000, and although the shipment of this wheat will no doubt take the better part of the coming summer, the fact remains that the moment the first cargo reaches Montreal, or tidewater elsewhere, that moment the money situation will feel its first relief. The Western banks are full of the warehouse receipts on which they have already advanced very large sums of money. This has, in fact, been one of the great factors operating during the last few months to create a tight money situation all over the country. The real relief comes when the grain is put on board the ocean liner at the port of Montreal, and the banker is placed in possession of the bills of lading with the insurance certificate attached. Then it becomes a simple matter of exchange, and the banker gets the money from the purchaser on the other side.

There must also be taken into consideration the fact that, although the wheat shipments from the West will necessarily be extended over several months, the shipments of other products, principally lumber, will also assist materially in overcoming the stringency in the money market. The timber resources of British Columbia are enormous and extremely valuable, when there is taken into consideration the additional fact of the accessibility of so much of it to the markets. A large number of Canadian and American moneyed investors have during the past few months been looking for British Columbia timber investments, and many important purchases have been announced. In the latter connection, it was recently reported in Victoria, B.C., that within a little more than a week there were 1,000 applications for timber licenses, a hitherto unprecedented record. Those who know state that there are very few speculators among those whose applications are being submitted to the department from day to day. They are men having confidence in the future of the country and anxious to get in on the ground floor of what they deem is a good thing. Taking all things into consideration, there need be no excuse for a pessimistic view of the Western situation. When people are worrying in the spring about the condition of money for the next winter, it is a sign that there will be an instinctive adjustment going on in municipal and private affairs alike, and it is probable that there will be enough contraction there and enough capital coming from abroad to obviate further trouble.

Because the possible yield of wheat in the West will be slightly lower this year than might have been, had more favorable weather prevailed, is no reason for anticipating financial embarrassment for the West, nor yet a wheat famine for the world at large Canada is not the only country raising wheat. Argentina has already sown a greater crop than in 1906, as has Australia also. India promises to have a crop at least as great as that of last year. In Europe there may be a slight shortage below last season's yield, but not necessarily a serious one. Russia will be watched with particular interest, owing to last year's failure, and because of the fact that she is a big exporter of wheat. Canada and the United States will, it is estimated, raise less wheat this year than last by 10 per cent., but it is still unsafe to predict in this regard. The 1906 crop was the greatest ever grown, and every effort will certainly be made to show no deficiency in the present year.

Just here the question may be asked: "Is a big crop desirable?" Heretofore the prosperity of the West has been judged by the crop prospects. A large wheat yield is regarded as synonymous with prosperity; credits are extended, and representatives of Eastern manufacturers and jobbers overrun the grain fields in a feverish endeavor to share in the farmer's good fortune. A crop failure or partial failure, for more than a partial failure can never occur in the West, has been in the past a signal for a shrugging of the shoulders, a restriction of credits and the impression that new enterprises must for the moment be held in abeyance. The time is past, however, when prosperity and big crops must be considered synonymous. Western Canada no longer depends solely upon wheat. Even the fear of crop failure is vanishing rapidly. Instead of one or two crops falling below the average, bringing the West face to face with ruin, farming is now so diversified that nothing except general crop failure can be considered serious. Almost every Western farmer now raises four kinds of grain, as well as live stock, hogs and poultry, and sells no inconsiderable quantity of dairy products. Nevertheless, the acreage under cultivation from the Arctic circle to the American boundary, and from the Rockies to the Hudson Bay, has increased enormously. Almost without exception the incoming settler, whether he be Ontario farmer or European immigrant, has in mind visions of unlimited wheat fields only. In consequence, wheat is the staple, and when wheat is down the farmer is in trouble. Big crops of wheat this year are not desirable. In the first place, a large surplus from the 1906 supply will be carried over. Should a big crop be harvested next fall the price will necessarily be low. The average farmer cannot afford to hold his crop till higher prices prevail, and consequently a smaller yield at a fair price will leave him in better circumstances than a large crop at low prices, with the inevitable additional handicap of poor transportation facilities next winter. A small crop will cost the farmer less to harvest and thresh, will require fewer laborers, and call for a smaller number of cars.

When Canada has a big surplus of wheat, such as occurred in 1906, it is generally considered that a large export business will be done. The situation is this: Last year a surplus of some 110,000,000 bushels was raised, and that should have been exported. Since July 1st, last, only about 65,000,000 bushels of wheat and flour has left the country, and by July 1st next no more than 85,000,000 bushels will have been exported. The old crop is backing up on the new to the extent of at least 25,000,000 bushels. Of course, it must be admitted that this is due, not so much to price, as to the inability of the railroads to handle the grain. Had it been possible to get it to the seaboard a much larger business could have been done. The question, therefore, resolves itself into this: "Can Canada, with the present service afforded by the Canadian Northern and Canadian Pacific Railways, export more than 100,000,000 bushels of grain, no matter how much more she can raise?" The history of the past winter indicates that this is the limit the railroads can be expected to handle, particularly so when it is considered how much additional freight in other lines another season will probably find clamoring for cars. Another big crop would see surplus piled on surplus. Even in the Saskatchewan elevators alone a surplus of 10,000,000 bushels will, it is said, be carried over.

In the last analysis, it may yet be deemed a matter for congratulation that nature has intervened to prevent an unwise increase in the wheat yield of the Prairie Provinces, and so has obviated conditions that might have proved seriously detrimental to Canada's welfare. While big crops would help the railroads in the stock markets, they might be the means of crippling them in Manitoba, Saskatchewan and Alberta. Furthermore, should crop reports from now until harvest indicate adverse conditions and point toward a reduced yield, let the Eastern manufacturer, jobber and money-lender not regard the situation with apprehension, but with satisfaction that a second crisis has been avoided that might have proved infinitely worse than the first.

MR. N. H. STEVENS.

It is thirty years since the county of Kent, one of the richest and most populous in Ontario, had the honor of the appointment to the Senate of Canada of one of its residents. For this reason, and in view of his eminent qualifications, Mr. N. H. Stevens, of Chatham, has recently been mentioned as the gentleman to whom the vacant Senatorship should be given.

Mr. Stevens is one of Chatham's most prominent citizens. Born in the county of Durham, he removed in early life to Kent in the year 1854 with his father, the late Enoch Stevens, who for many years conducted successful farming operations. Mr Stevens entered mercantile life in 1867, when he bought a general store in Blenheim. He also operated a planing mill and sash and door factory, and carried on a contracting business. He removed to Chatham in 1880, and, along with others, built the first roller flour mill in the Dominion. He has since been constantly connected with the milling business, and is now president and manager of the Canada Flour Mills Company, Limited, with mills at Chatham and Blenheim, Ont.; vice-president of the Blonde Lumber & Manufacturing Company, Chatham; vice-president of the Chatham, Wallaceburg & Lake Erie Railway Company; director of the Sutherland-Innes Company, Chatham, Chatham Navigation Company, and the Reliance Loan & Savings Company of Toronto.

Mr. N. H. Stevens, Chatham, Ont.

Mr. Stevens' diversified interests have given him a very thorough knowledge of things industrial and commercial, as he has naturally travelled largely. He has visited nearly all the towns and cities in Eastern Canada, has made several trips through Manitoba and British Columbia, has been through nearly every state in the United States, and has also visited the European countries. He recognizes more than the average Canadian the enviable position which Canada holds on account of her vast agricultural and mineral wealth.

Mr. Stevens has served on the High School Board and Town Council, and in other positions of public trust, being always anxious to promote the welfare of the people and his native country. He has a family of seven sons.

5,000 FACTS ABOUT CANADA.

A remarkable little booklet has been compiled under the above self-explanatory title by Frank Yeigh, of Toronto, the well-known writer and lecturer on themes Canadian. Perhaps no one in the Dominion is better qualified to make such a compilation. Its value is, as claimed, "worth its weight in Yukon gold or Cobalt silver." The idea is a clever one, viz., a fact in a sentence, giving a wonderful mass of information in the smallest compass on every phase of our commercial and industrial life and our natural resources. The booklet is sold for 25 cents and may be had from newsdealers or from the Canadian Facts Publishing Company, 667 Spadina avenue, Toronto.

WESTERN CANADA

Western Offices of The Canada Lumberman,
615 Hastings Street, VANCOUVER, B. C.; 720-721 Union Bank Building, WINNIPEG, MAN.

THE BAKER LUMBER COMPANY.

The Baker Lumber Company, of Waldo, B.C., commenced this year's sawing on April 1st, this being the first season with their new mill, which was completed last fall. They are cutting at the rate of about 50,000 per day.

During the winter they have built the new planing mill. This building is 60 x 110 feet, of frame construction, with iron roof. The machinery is chiefly of McGregor-Gourlay make, and consists of a sticker, planer and matcher, large timber planer taking 12 inches x 30 inches, a circular rip saw and a wood-turning lathe, also a Mershon resaw. They purpose installing another large planer and matcher during this summer. They have been logging steady all through the winter, and have now about ten million feet of logs ready for cutting up. Logging will continue all through the summer. They have sold their entire output for this year, which will amount to about 12,000,000 feet of lumber, to Marriott & Company, of Vancouver

a circular saw outfit, having a capacity of 40,000 feet per day, has been torn down and a new plant is in course of erection on the old site.

The main building of the new plant is 64 x 200 feet, frame construction built on piles, with corrugated iron roof. The framework of the lower story consists of 14 inch x 14 inch timbers, while the upper story is of 12 inch x 12 inch timbers. It contains one double cut 14 inch band mill, with 8 foot wheels, on the left side, and a single cut 12 inch band mill, with 8 foot wheels, on the right side.

In the centre, at the rear is a gang saw, 48 inches wide, with 16 inch stroke and 16 inch depth of cut; also two edgers behind, one on each side. That on the left side is a 60 inch double edger, while that on the right side is a 56 inch one. The gang saw rests on its own concrete foundation. The gang saw, single cut band, and the 60 inch edger were all manufactured by the Giddings & Lewis Manufacturing Company, of Fond du Lac, Wis. The balance of the saw mill equipment was furnished by the Waterous Engine Works Company.

SAWMILL OF THE BAKER LUMBER COMPANY, WALDO, B.C.

The logs are brought from the mill pond, in the Columbia River, which passes close by the mill, by means of an endless chain jack ladder, up on to the steam log deck in the centre. This steam centre deck is equipped with steam loaders and steam niggers.

Each carriage is equipped with steel block and steam set works, and is operated by shot-gun feed. After leaving the carriages the cants for the gang are thrown on to skids in front of the gang by means of steam cant flips and steam skid lifters. After passing through the gang the stock is transferred to the edgers with steam stock lifters. Leaving the edgers, the lumber passes on live rolls back of the edgers to a steeple transfer top, which carries it up to the trimmers. After passing through the trimmers it drops automatically on to an endless sorting chain 250 feet in length, from which it is sorted and loaded on to the yard cars. The sorting chain and tables are covered by a building 40 feet wide by 200 feet long. The yard cars are four-wheel vehicles, running on 28 inch gauge tracks. They are put on to the main line of yard track by means of a transfer car system, and the lumber is hauled thereon to the piling ground by a single horse.

All timbers sawn after leaving the saws are transferred on live rolls direct out of the end of the mill on to a timber and loading dock, about 200 feet long, from which they are loaded direct on to the cars. Adjoining the side of the main building at one end is a 24 x 70 foot wing, which is used for a lath mill. This contains a gang lath bolter and lath machine.

The slab and refuse conveyor passes near this, and the material used for manufacturing lath is sorted therefrom and transferred on chains to the lath mill. The refuse is taken by means of a malleable link block chain, full width of the conveyor, to a steel burner, located about 50 feet from the mill building. This burner is what is known as the water jacket type, and is 33 feet in diameter by 120 feet high, built on a concrete foundation rising six feet above the ground. In addition to this method of disposing of the slabs and edgings, there will be a "hog," or edging grinder, for grinding up slabs and edging into fuel. This will be located in the mill proper, at a convenient point.

There is a wood cutting machine for cutting four slabs into 12 or 16 inch stove lengths.

The power plant for the mill consists of a battery of eight 60 inch x 16 foot tubular boilers, Waterous make, with half front arches, and connected up with induced draft. There is an automatic sawdust feed over the boilers, with a fuel room having an endless chain feed. These boilers are located in 42 x 84 foot boiler house, constructed of cribwork with corrugated iron roof, and located 20 feet from the main building.

In the lower story of the mill are two 20 inch x 24 inch Waterous engines, connected together, working on a quarter, for driving the main mill machinery, and a 19 inch x 24 inch automatic Atlas engine, driving the gang. The engines are all placed on concrete foundations.

The filing room is located at the top of the mill and consists of an automatic band saw grinder for the single cut, an automatic grinder for the double cut, an automatic grinder for the gang saws, and an automatic grinder for the circular saws; also all the tools necessary to complete a filing room

EXTENSIVE IMPROVEMENTS BY THE COLUMBIA RIVER LUMBER COMPANY.

An important change has taken place in the ownership and management of the Columbia River Lumber Company at Golden, B.C. The part interest owned by Messrs. Fred. Jones, M. Carlin and H Sutherland has been purchased by a party of American capitalists, including J. D. McCormick, A. D. Davison, and A. D. McRae At a recent meeting of the company Mr. McCormick was appointed managing director of the concern, with headquarters at Golden.

The Columbia River Lumber Company's interests include mills at Golden, Kault, Beaver and Carlin, B.C., and extensive timber limits adjacent to all of the mills.

The plant at Golden is undergoing a complete change. The old mill, which contained

equipment. These are operated by a 6 x 8 engine.

The planing mill building is located 975 feet from the saw mill. It is a one story frame building, with iron roof, and covers an area 68 feet wide by 120 feet long. It contains about ten machines, namely, two 12 inch x 30 inch two-sided surfacers, of Cowan manufacture; two 6 inch x 15 inch Berlin planers and matchers; one 6 inch x 12 inch Berlin inside moulder; one 6 inch x 9 inch McGregor-Gourlay matcher; one self-feed rip saw; one circular siding saw, and a band re-saw. There is a transfer car platform from the yard to the planer, and from the planer to the cars the output will be handled with two-wheel trucks. The planing mill will be equipped with a blower and separator system, with a double 60 inch fan, to take care of the shavings.

Power for the planer is furnished by two 72 inch x 18 foot boilers, and a 19 inch x 24 inch slide valve automatic engine. These are located in a concrete, iron-roofed boiler and engine house, placed about 8 feet from the planing mill. In this building are also two electric light dynamos, each operated by its own engine. These dynamos will supply not only the saw mill plant, but also the town of Golden, with light.

A new machine shop and blacksmith shop has also been erected. The machine shop is 30 x 60 feet, and contains a lathe taking 38 inch swing by 18 feet length, a 30 x 30 planer, a drill press, and band saw and wood lathe in the pattern shop.

The plant throughout will be thoroughly equipped for fire protection, there being hydrants and standpipe at all points in the yards and buildings, also hose boxes located at convenient places.

The piling grounds are replete with 28 inch guage tracks running to all parts of the yards. Cars for these are manufactured to order.

Many other new buildings are to be erected at once, including new offices, store, boarding houses and residences for married men. The reconstruction of this plant has been carried out to the plans of and supervised by Mr. Geo. F. Rice, of Wisconsin.

NEW SAW MILL POWER PLANT.

The Elk Lumber Company, of Fernie, B.C., have during the past winter made an important change in the power plant of their saw mill. The old boilers have been taken out and in their place have been installed five new ones, each 72 inches by 18 feet in length, the product of the Diamond Boiler Works, of Minneapolis. Each boiler is rated nominally to develop 150 horse-power. The boilers are equipped with Dutch ovens, and are fed automatically. They are also equipped with an induced draft system, operated by 200 inch fan. This fan is set on a concrete foundation, located in the new machine shop, which adjoins the boiler house, and is driven by 10 x 12 engine, used entirely for that purpose.

The new machine shop, like the boiler house and the saw mill building, is constructed entirely of cement blocks. It is about 30 x 60 and contains a full complement of tools, including two lathes, a planer, a shaper, drill press and bolt cutter.

The company has also erected a new planing mill at a site more convenient in its relationship to the saw mill than the old one was. It also is considerably larger, being 40 x 120 feet, and, in addition to the machinery formerly in use in the old planing mill, it contains two new Berlin planers and matchers of No. 94 model. It also contains a blower and separator system, operated by a double 15 inch fan and a single 16 inch fan, which have been installed by the Columbia Blower Company, of Nelson, B.C. A large sorting table adjoining the planing mill has been erected. The saw mill and planer will be connected by an elevated platform supporting a continuous chain system of transfer.

Power for the new planing mill will be derived from a 20 x 34 Buckeye automatic engine, the steam plant consisting of five of the boilers taken out of the saw mill. These are contained in a separate boiler house, built of concrete blocks.

For this season's cut they got out a larger supply of logs from their camps during the winter than they had the previous winters.

DRY KILNS AT E. H. HEAPS' NEW MILL.

The first of a set of six new dry kilns to be installed at the new plant of the E. H. Heaps Lumber Company at Vancouver, B.C., has been completed and is now in operation. These kilns are solid concrete construction, being absolutely fireproof, and each 20 feet wide by 122 feet long.

The heating system and the trucks are being supplied and installed by the North Coast Dry Kiln Company, of Seattle, Wash. The system of piping in each kiln contains, all told, about 10,000 feet of 1 1-4 inch pipe, supported on a steel foundation, and is guaranteed to thoroughly dry 20,000 feet of one inch fir in 24 hours.

The North Coast Dry Kiln Company have secured the order for the installation of two of these kilns at the plant of the Red Fir Lumber Company, Nanaimo, B.C., each kiln to be 20 x 60 feet, same style as Heaps', and the drying capacity guaranteed in proportion to the size of the kiln.

THE OTIS STAPLES MILL.

The Otis Staples Lumber Company, of Wycliffe, B.C., have made some changes and improvements in their plant during the winter shut-down. A new horizontal re-saw, made by the Diamond Iron Works, of Minneapolis, has been installed in the saw mill, which increases the capacity about 20,000 feet per ten hours. They have also put in a new refuse conveyor, 300 feet long. This is a cable and disc system, being supplied by the Kootenay Engineering Works, of Nelson.

In the planing mill department a new 18 foot x 24 foot engine has been put in, replacing a smaller one, and giving some 200 horse-power. An additional boiler, 72 inch x 18 foot, of Hamilton make, has also been installed.

The planing mill staff has been added to by the installation of five new Berlin machines, consisting of a double surfacer 12 inch x 30 inch; two No. 94 planer and matchers, one No. 108 moulder, and one rip saw, this bringing the shipping capacity of the plant up to 180,000 feet per day.

In the logging department they have a new 55 ton Shay locomotive and 20 Russell log cars, and have built two more miles of railway in the timber limits.

KEEPING A CIRCULAR SAW.

To keep a saw from heating, the saw teeth and gauge should be suitable to the wood, and the saw should be well sharpened and run at the proper speed. The saw blade should be carefully packed, the feed not crowded and the cut opened out immediately it passes the saw. The saw guide is sometimes continued too far along the face of the saw, and thus crowds and heats the plates through not allowing sufficient room for the wood to open out as it is cut. If the fence extends, say three inches beyond the roots of the teeth, it is usually enough.

Heat is often communicated to a saw through the saw spindle, through the bearings being out of order or screwed up too tight, says the "Timber Trade Journal." The saw should not fit too tightly on the saw spindle or bind the steady pin. A saw when hung properly should in the horizontal line incline very slightly toward the timber, so that the teeth at the back of the saw may rise without scoring the wood. If the driving pulleys are too small or run at too short centres the bearings will heat.

A CONCRETE SAW MILL.

The Central Pennsylvania Lumber Company, of Williamsport, Pa., have arranged to construct a big saw mill plant near Sheffield, that state. A number of unique features will be included in the construction of the plant. It will be built of solid concrete, with electricity for motive power. It will be a three-band mill, with a capacity of 200,000 feet a day with a single crew, or 400,000 feet double time. From fifty to seventy-five million feet a year are to be cut and manufactured by this plant, the logs being supplied from the extensive timber holdings of the Central Pennsylvania Lumber Company in the Pennsylvania hemlock fields.

While concrete mill construction is not a wholly new idea in saw mill building, this is but the second venture in that line which has been made, the first venture not being yet completed. Of course the greater advantage accruing from this class of construction is the large saving in insurance, as such a mill is fireproof to the highest degree. In the case of this new plant the concrete is to be reinforced, making the work exceedingly durable, while the use of electricity for driving likewise removes the fire hazard of boiler house and engine room. The new mill will be more costly than an ordinary saw mill.

WOOD PULP DRYING

By A. T. Lewis, B.M.E.

Those in the inside circle, with a knowledge of manufacturing cost, will have to admit that it has always been a serious problem to bring the cost of drying, if the stock be turned out on a wet machine, within a figure which seems at all reasonable. This was due not only to the large amount of handling which was necessary to place the paper in the drying room, but the mere expense of operating the dryer, that is, furnishing steam to the radiating coils, etc., appears as a sizable percentage of the whole cost. If the paper be sun-dried there is still a larger cost for handling, the cost of the heat supply in this case being nil. However, the manager has no insurance which can be placed on the weather conditions, and is badly handicapped when estimating on time

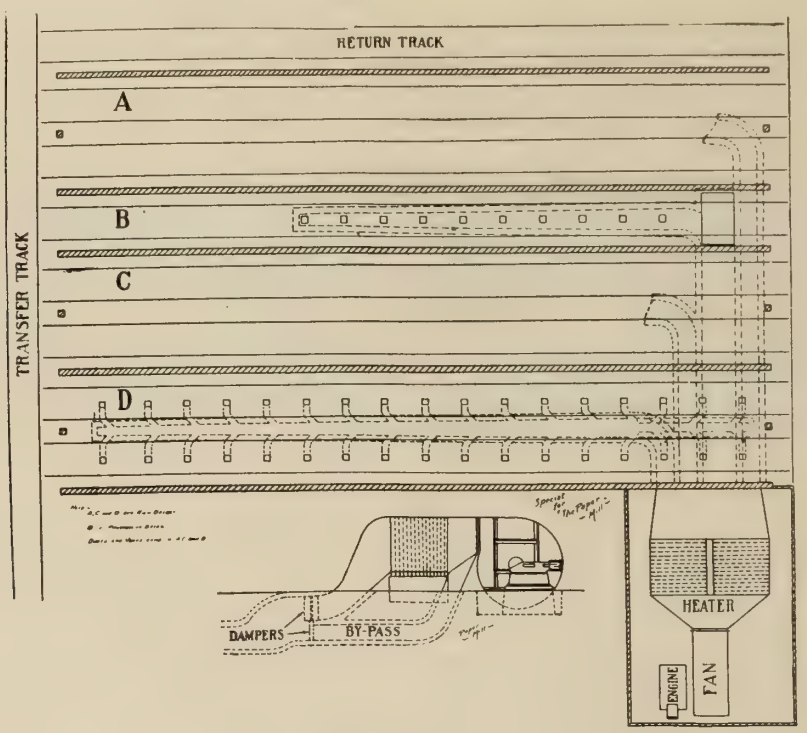


Fig. 1.

which will be taken to get out any given amount of stock ordered.

Though fan systems have been widely used for drying leather, lumber, woodenware, brick, tile, clay, pottery, etc., and though it has been applied to drying the thicker papers and wood pulp sheets made on wet machines to a certain extent, its use is by no means as extensive as is compatible with its advantages —both as a convenience and as a cost reducer.

The basis of any drying system in which air is used as the transfer agent to remove the moisture is, of course, its capacity and ability to absorb moisture. At any given temperature air cannot contain more than a specific amount of water vapor—at which point it is said to be saturated; further addition will cause condensation. Engineers commonly use the hygrophant or wet and dry bulb thermometer to measure the amount of moisture in the air. The operation of this instrument is dependent on the principle that evaporation lowers temperature and that the rate of evaporation is dependent on the moisture condition of the surrounding atmosphere. By comparing the temperatures of two thermometers, one with bulb kept wet by being wound with wicking dipping in water and the other with bulb dry, and referring these temperatures to calibrations which have been verified by government experts, we can ascertain the percentage of saturation; and knowing the air temperature with dry bulb, we can also find the total amount of moistue contained at saturation. The product will give the moisture content subtraction. the amount which can be added without condensation taking place, and the product of this amount by 40 or 50 per cent. will give what may be assumed as the average weight of water which may be carried away per cubic foot air if the practical commercial system be under consideration. It has been found most economical to employ an air velocity such that the time will allow the air to only take up about one-half the moisture which it is theoretically possible to make it absorb. The curve shown herewith gives in graphical form the temperature readings of the wet and dry bulb and the moisture content of the air corresponding thereto.

As a method of explaining the tests and general outline of how dryers should be figured, we will consider a specific case which was recently laid out by the Buffalo Forge Company, of Buffalo, N.Y. In this case the pulp board had been previously sun-dried, but as material additions to the output of the plant were desired the change was made. The size of the sheet to be dried was 6 feet by 8 inches, and came from the machine about 1-8 of an inch in thickness. The capacity desired was 2,000 sheets in 24 hours.

The kiln shown in the layout consists of three rooms 90 feet by 8 feet by 14 feet, and one room 90 feet by 8 feet by 7 feet. The larger rooms contain two tracks running lengthwise for the accommodation of the cars on which the paper to be dried is placed, and the smaller room contains but one track. Lengthwise the tracks will accommodate ten cars. The air outlets, from the air supply ducts running from the fan, are in every case in the centre of the track in order to secure the full effect upon the paper. In the larger rooms the temperature is maintained constant from the time the paper is placed therein until it is removed. In the smaller room, however, the cars enter at A and are taken out at B, the temperature being gradually increased and the humidity of the air passing over the paper gradually decreased from A to B.

As a first warning, care must be taken not to use too high a temperature in the drying process, as this will injure the board and prevent the paper from having its full strength, due to the fibres being broken by the shrinkake, warping, etc. In tests made on samples of this board it was found that with an average depression (or difference between wet and dry bulb temperatures) of 60 degrees and an air velocity over the surface of the paper of 750 feet per minute, about 1 545 grains of water could be removed per hour per square foot of board, which contained as a maximum 2,400 grains (or 0.344 pounds) of water per square foot. Below is given the tabulation of results of two tests on a sample of the board. These tests were made with the board holding as much water as it would take up when placed in the air blast. Velocity of air in test No. 1, 625 feet, in test No. 2, 1,375 feet. Weight of board wet, 3.36 pounds; weight of board dry, 1.44 pounds.

Test No. 1.

Time.	Temperature Degrees	Humidity Per cent	Depression Degrees	Wet Board Pounds
10.30 . . .	148	94	54	3.36
11.05 . . .	156	94	62	2.58
11.30 . . .	154	94	60	2.04
12.00 . . .	154	94	60	1.62
12.30 . . .	155	93	62	1.44

Test No. 2.

Time.	Temperature Degrees	Humidity Per cent	Depression Degrees	Wet Board Pounds
3.00. . . .	149	89	60	3.36
3.30. . . .	146	88	58	2.08
3.45. . . .	148	89	59	1.76
4.00. . . .	152	90	62	1.63
4.15. . . .	150	90	60	1.44

It was decided to do one-half the drying, i.e., remove one-half the moisture from the sheets in a dryer of the progressive type, that is, where the temperature is gradually increased as the moisture is removed. The general arrangement of this kiln will be noted on the layout—the cars carrying the paper on wire screen shelves are entered at A, and as fast as they are removed at B more cars are entered at A, and the paper thus gradually reaches the temperature at which most of the

water will be removed without injury to its fibre. The progressive dryer will hold ten cars at a time, each car holding twenty-two sheets, 6 by 8 feet, of the wood pulp board. One of these cars was to be taken out at B, and another with undried paper started at A every twelve minutes—thus it requires two hours for the car to go through the kiln. A particular feature will be noted in that just before the car leaves the progressive kiln at B, it stands for twelve minutes directly over a large opening from the air supply duct, which will thoroughly heat the paper and prepare it to enter the closed kilns which are to remove the last 50 per cent. of the moisture at a constant temperature.

Cars after leaving the progressive dryer go to the closed kiln, and when the kiln is full the heat is turned on. They remain here for nine hours, when they are perfectly dry and ready for shipment. Two of the closed kilns are in use at a time, while the third is being

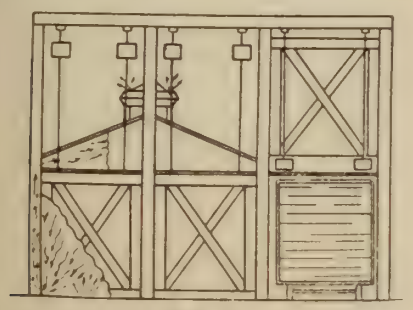


FIG. 2.

filled, the transfer allowing ready changing of cars from one place to another.

A Buffalo three-quarter Housing 140 inch steel plate fan is shown directly connected to a horizontal engine. Speed, 170 revolutions per minute. The heater consists of fourteen sections, 5 feet by 7 feet by 10 inches, of the manifold type, containing in total 8,554 lineal feet of 1 inch pipe. Seventy-five cars will be required to operate the plant.—The Paper Mill.

WEIGHTS OF NORTHERN HARDWOODS.

The Northwestern Hardwood Lumber Association, at a recent meeting at Minneapolis, adopted the following weights for northern hardwoods:

	Pounds.
Brown ash	3,250
Birch	4,000
Hard maple	4,000
Soft maple	3,500
Rock elm	4,000
Basswood	2,400
Butternut	2,500
White oak	4,000
Red oak	3,800
Soft elm	3,000
Basswood ceiling, 3-4 in.	1,500
Basswood siding and ceiling, 3-8 in.	800
Oak flooring, 13-16	2,100
Maple flooring, 13-16	2,100
Birch flooring, 13-16	2,100

Henry Disston & Sons are building a one-storey brick addition to their saw factory at 112 Adelaide street east, Toronto.

Trade Opportunities

ENQUIRIES.

The Department of Trade and Commerce have received the following enquiries. The names of the firms making these enquiries, with their addresses, can be obtained by those especially interested in the respective commodities upon application to the Superintendent of Commercial Agencies, Department of Trade and Commerce, Ottawa.

225. BOXES.—A Transvaal chemical company desires to get into touch with Canadian manufacturers of boxes, for candle purposes. The requirements of this firm are from 35,000 to 50,000 per month.

263. WOODEN HANDLES.—A Birmingham firm would like to hear from Canadian firms open to supply wooden handles.

276. CARRIAGE TIMBER.—A firm in Natal is desirous of being placed in communication with Canadian firms dealing in carriage timber for export.

283. MAHOGANY AND RED CEDAR LUMBER.—An exporting house in the city of Mexico wishes to make connection with firms in Western Canada for the sale of mahogany and red cedar lumber.

287. LUMBER AND TIES.—An importing house in the city of Mexico wishes to make connection in Canada for the purchase of lumber and ties.

290. PLANED BOX BOARDS.—A Lancashire firm asks for prices c.i.f. Manchester of planed box boards sizes 26 inch x 7 inch x 1-4 inch and 16 inch x 7 inch x 1-4 inch from Canadian shippers.

293. CHAIR SEATS AND BACK.—A Manchester firm with connection throughout England desires prices of chair seats and backs from Canadian manufacturers.

294. PINE FLOORING BOARDS.—A Lancashire firm wishes to obtain prices of pine flooring boards tongued and grooved, from Canadian manufacturers.

299. PINE DOORS.—A Manchester firm asks for prices c.i.f. of pine doors, standard sizes, from Canadian manufacturers.

409. PINE DEALS AND SIDINGS.—A Manchester firm asks for prices of pine deals and pine sidings from Canadian shippers of same.

414. BUTCHERS' HICKORY SKEWERS.—A Lancashire firm at present buying in the United States asks for prices of butchers' hickory skewers packed in barrels c.i.f. Manchester, sizes 4 1-2 inch x 5-32 inch, 5 1-2 inch x 5-32 inch, 6 inch x 1-4 inch.

415. BUTCHERS' MAPLE BLOCKS.—A Lancashire firm asks for prices c.i.f. Manchester of butchers' maple blocks, reversible, without legs, sizes 4 feet x 2 feet x 9 inches, 5 feet x 2 feet x 9 inches, and 6 feet x 2 feet 3 inches x 9 inches.

451. PICK AND SHOVEL HANDLES.—A Sheffield firm wishes to hear from firms open to supply pick and shovel handles.

454. WOODEN HANDLES AND MAPLE SKEWERS.—A London firm wishes to hear from shippers of wooden handles and maple skewers.

465. PITCH AND OREGON PINE.—A firm in Egypt wishes to purchase large quantities of pitch pine and Oregon pine.

467. WOODEN HANDLES.—A Wolverhampton firm wishes to hear from Canadian firms who can supply wooden handles in very large quantities.

QUOTATIONS FOR BOXES.

Mr. W. T. R. Preston, Commercial Agent at Cape Town, South Africa writes to the Department of Trade and Commerce at Ottawa as follows:

"An application has been received at this office for quotations for the supply of boxes to the extent of 35,000 to 50 000 per month. Firms quoting must be prepared to compete against Norwegian and Swedish manufacturers. The sizes of the boxes are as follows: 13 inch x 9 inch x 8 inch, 16 1-4 inch x 8 1-4 inch x 9 3-4 inch, 13 inch x 10 1-4 inch x 8 7-8 inch, 13 inch x 9 1-8 inch x 8 5-8 inch.

"The communication is from the New Zealand Transvaal Chemical Company, Limited, P.O. Box 1829, Johannesburg."

NQUIRIES FOR LUMBER PRODUCTS.

Mr. Harrison Watson, Canadian Government representative at London Eng., writes as follows:

"During the past year this office has received a large number of inquiries from importers seeking supplies of manufactures of wood of nearly every description. These have included furniture, doors, sashes, mouldings, dowels, implement, broom and tool handles, washboards, shooks, flooring, veneer, curtain poles, billiard cues, lacrosse sticks, etc., etc. Some few intimations which we have received from Canadian manufacturers of such goods seeking export trade and to which some publicity has been given, have resulted in a large number of replies, and it is apparent that there is a very large opening for development of trade in this country in most of the lines enumerated.

"It is to be feared that latterly the volume of actual trade has been limited owing to the particular conditions prevailing in Canada, where the active demands of the home markets have been so heavy as to leave but little surplus stock for export purposes. It appears somewhat curious that still greater development in the wood-working industry does not take place in Canada. The immense timber resources of the country, and the almost universal prevalence of cheap water power, furnish natural facilities for the development of this industry which must be almost unequalled.

"The existence of certain and definite markets for the products of the factories in this and other countries should attract further capital for the erection of additional establishments. Even taking into consideration the fact that Canada does not possess sufficient quantities of some of the timbers largely used in the United States and elsewhere in the production of certain varieties of wooden goods, there remains a large number of goods in which a ready sale must exist for many times the quantity at present being turned out."

THE Wood-Worker and Retailer

STOCKING UP BY THE RETAIL TRADE.

Stocking up and keeping stocked up has always been one of the problems in the running of a retail lumber yard. Any man with average ability can sell lumber; this is largely a matter of prices and a disposition favorable to "quick sales" and "small profits." But to keep up a stock without getting overstocked requires something more than the figuring of a bill or the attending to the ordinary details of the business pertaining to the selling and collecting. In the larger fields of business the buying is a separate and distinct department of its own, and the man upon whom this responsibility is placed is practicallly entrusted with the success of the whole concern. A stock buyer for a large house is forever, in a certain sense, dealing with the unknowable, and upon his ability to penetrate and foresee the trend of present conditions and their development during the year depends the profitable results of that year's business. It is only when business is conducted on a large scale that this feature becomes a prominent one; but the principle of it is essentially the same in every line of business where a stock of goods is carried and sold, whether it be on a large or smaller scale it matters not; its line of continuity runs through them all.

Elements of Chance in Buying.

The old and trite saying, "Well bought is half sold," is true and well enough, as far as it goes, but it is not all there is to the buying of stock. Good judgment of prices is one thing, but how much to buy is another consideration as well. And it is this latter feature of the problem which, to some extent, borders on the speculative; and the element of chance enters when the line of certainty ends. There are certain lines of business that are more susceptible to and dependent on this than others, which are more staple from the nature of the commodities handled; but every buyer has to contend with it more or less. In the forming of his judgment he has to take into consideration not only present conditions in the business world, but he must reason out their logical tendency as well, because there is such an intimate connection between the business factors all over the country, that what affects one affects them all in a greater or less degree. The chief element in the conditions which affects the lumberman is the success or failure of the crops. His business is, perhaps, more sensitive to this than almost any other, and in the calculations of the country dealer he sees or knows of but little else outside of his domain of action which can possibly affect him more than the conditions of his immediate vicinity. And whatever they are, be they prosperous or otherwise, he is pretty apt to think the whole world outside is the same. This is natural, of course, because we are all influenced by our environments; but when it becomes so that it narrows our view of general conditions it materially lessens the character and extent of our judgment. This is often observed in men who cannot see why the demand should cause the prices of lumber to advance when there is a dearth of building in their neighborhood. If there is a persistent failure of crops in a certain district of a state, or even throughout the whole state, the dealers affected by it generally imagine that lumber is going to go down in consequence, and accordingly they will put themselves on the waiting list before buying any more stock. The farmer who is buying no lumber and knows that his neighbors are buying none, either, has the same opinion as the dealer; both have the same sentiment, and both operate on the other to think the same thing of the lumber market. Of course, this may seem to border on the unreasonable. For the farmer there is a certain amount of excuse, but for the dealer there is less, because of the opportunities afforded him of keeping posted on everything pertaining to and affecting his business from the outside. Very few dealers feel like laying in more stock when trade is dull, and still less so when the period of dullness has been continued for some time. Their old stock has become old and a good deal of it is weather-beaten, and they want to get rid of it before a new supply is brought in. The dealer is lucky who has a small stock on hand when the dull times strike him, but he is still more fortunate if he has a good supply of stock ordered and coming when trade revives again. And there is hardly anything more certain than that the one extreme will succeed the other.

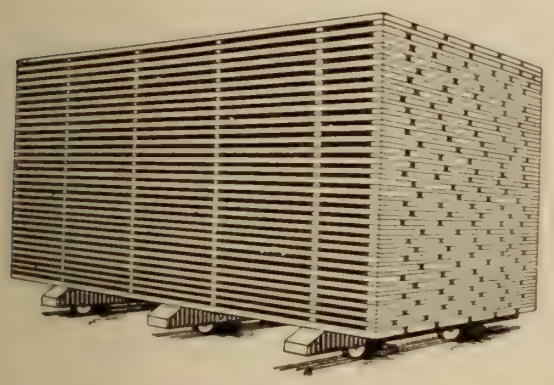
No Risk in Buying Lumber on a Slump.

In these days of uncertain transportation, and where there is the means to purchase and the facilities to care for and protect stock as it should be, a dealer runs no risk in taking advantage of a slump in prices and piling good lumber up in his yard, for it will be sure to pay him as good interest as any of the average good investments that are offered. But, of course, it won't do to get in a lot of lumber and simply put it in piles, exposed to the weather, and let it take care of itself. There is too much money represented in lumber nowadays to treat it as it used to be in the old-time days of the trade. A piece of board or a stock of dimension means a value of a good sized fraction of a dollar. A farmer doesn't put dollar wheat in a leaky granary, if he knows it is in that condition; and so it is with our lumber at the enhanced prices of the present time—it requires the same degree of care that dollar wheat does. With good, roomy and well-ventilated sheds, and good drainage in the yard, there is no reason why lumber that is in good condition when put in piles should not keep so for a year or more, or until it is used. When lumber dealers get so that they will build sheds with the view of using them for storage of stock, if necessary, the problem of car shortage will cease to worry them as it does now. The experiences of the last two years have taught the lumbermen that the old time methods of "hand-to-mouth" buying have ceased to be a profitable policy where they are any great distance from the point of production. This habit of waiting to order stock when trade begins to pick up and then calculating it will come in at the time it is needed is poor policy for the dealer who is several hundred miles from market. 'Tis true there are many whose limited capital will not permit them to back up their judgment in laying in a stock several months ahead of when it is likely to be needed. But where this is the case there should be a thorough system of canvassing the community and ascertaining the probable disposition towards building and repairing for the coming season. This, together with his own knowledge and estimate of the general conditions surrounding him, ought to give him a pretty fair basis for calculating, at least six months ahead, the amount of stock necessary to meet the demand. The average dealer is always looking for a slump in prices; he is always thinking that the top notch has been reached, and that if he wait but a little while longer he will be able to buy cheaper. This possibly acts as a bugbear to many and serves to weaken their nerve in the promptings of their better judgment. This might be all right when stock can be had as needed and gotten on the ground within a reasonable time, but present and the probable future conditions are against this style of reasoning, and the chances are for a losing game if this course is persisted in. I may be wrong in my view of the matter, and, of course, you understand that in discussing

it I am considering in a broad, general way that is applicable to the trade as a whole, and I believe that prevailing conditions will eventually force the retail trade to cease the considering so much of the question of prices, and go for the lumber when they can get it, no matter what the prices may be at the time.

DECLINES IN LUMBER PRICES MERELY TEMPORARY, AS A RULE

But the question is likely to be raised in this connection, "What is a dealer to do with a large stock on hand and the prices in the wholesale market go down on him?" This is one of the chances that is inevitable in any business, but we know again that in the lumber market any fall in prices is liable to be but of a temporary character, and chiefly



CORRECT WAY TO PILE LUMBER FOR DRYING.

owing to the time of year. Again, the retailers have it within their power to save themselves from any consequent loss arising from this contingency. They can do it if they will, and it often proves to the advantage of the dealer so circumstanced, because with such a stock he is not liable to be anxious about cutting the prices on a bill. As a matter of good business policy prices to the consumer should always be based on what lumber costs in the local yard, and not on what they may happen to be at the time in the wholesale market. It is all too common a thing for dealers to look at the last wholesale list when they are called to figure on a competitive bill. This may do when the last list is higher than what their last orders were bought at, but where they happen to be at a lower notch, the cost should be the prices at which they paid for the stock on hand or what was last received, and which is required in the bill. The prices given the consumer should have nothing to do with the wholesale market at all. He is not buying of the wholesaler; he is buying of you, and your cost prices should be the governing basis in the estimate.

COST OF CARRYING STOCK.

There is another thing, too, in this considering of cost which has usually been ignored by the retailer. This is the cost of carrying the stock on hand. It has not been taken into account chiefly by reason of the fact that dealers in general have not cared to get in any more lumber than was sufficient for the actual present needs of this trade. When a carload came in they were not satisfied until it was hauled out again at any price they could get for it, and then sit down and wait for the car they ordered the week before. But, as I have before remarked, the continued congestion in transportation matters and the overburdened sources of production have combined to educate the retail trade to the necessity of carrying larger stocks in their yards. And being thus compelled to do, the burden of carrying them will have to be considered a part of the fixed charges in the expense account, and therefore the yard prices must be figured accordingly. Those who have to borrow money to supplement their own capital in carrying these increased stocks will have a greater realizing sense of the necessity of this than he who thus invests his own money, because the interest payments have a more tangible evidence that it is an expense and will appear later on in a stronger form of evidence when the yearly balance sheet is made out.

There has always been a prevalent idea among some business men that a party operating with his own money could afford to do business cheaper than he who was using some borrowed capital. In a certain sense this may be true, providing one is willing to give the interest on his own money to the customer. In theory the legal rate of interest on money should be charged up against the cost of conducting a business, but if this was always carried out in practice by those who recognized the soundness of this policy, there is many a situation where they would hardly ever capture a competive bill. It would be a good idea sometimes to forget for the moment that we are operating on our own capital, and consider only that we would have to make up part of the interest out of the bill we are figuring on. We have absorbed some of the wholesale raises on lumber during the past year or two, but have gone on oblivious to the fact that we have allowed the public to absorb the natural interest on our capital. We put money in a bank and expect interest on it; we put it in piles of lumber and think of the interest only as it is mixed up with the profits, but few separate it, however, in that way.—St. Louis Lumberman.

PILING LUMBER FOR DRYING.

The accompanying illustration shows the method recommended by the United States Forest Service as the correct way to pile lumber liable to warp in drying. Place upon the trucks a foundation of 2 inch planks. The sticks are to be laid one directly over the other, and one tier should be at the very ends of the boards, or it may even project beyond the ends to prevent too rapid drying at this point. As far as practicable, place the sticks directly over the trucks. This is much more important where heavy foundation planks are not used.

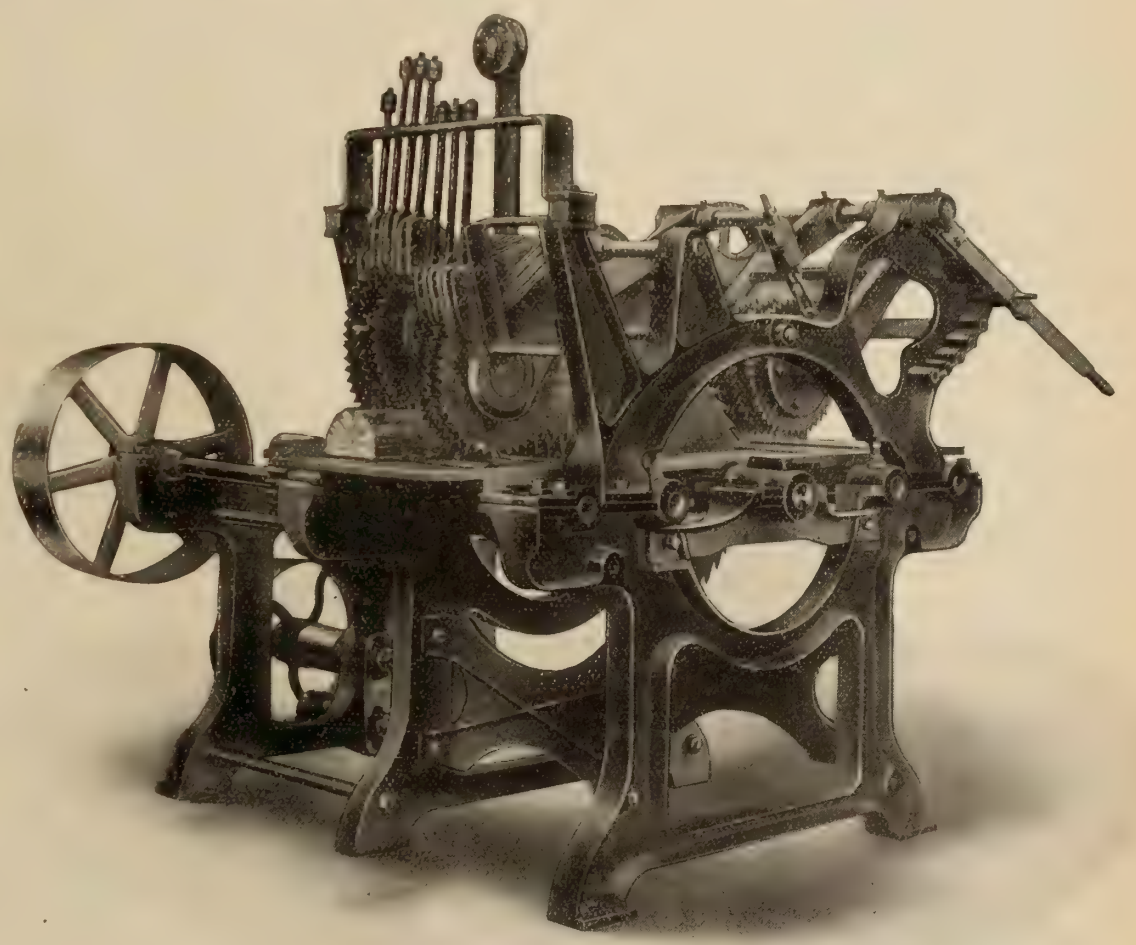
NEW SEVEN-SAW LATH BOLTER.

The accompanying cut shows a new heavy lath bolter which has been put on the market this season by the E. Long Manufacturing Company, Limited, of Orillia, Ont. It is a seven-saw machine, and is so constructed that any material up to 24 inches in width and from 1 inch to 8 inches thick may be bolted. The feed rollers are all driven and the top feed rollers are so arranged that they raise themselves when the bolts are being fed in. Once a bolt has entered this machine it is impossible for it to kick back, on account of the front feed rollers being driven, which prevents them from reversing while the machine is in operation, and the upper delivery rolls being dogged, which only permits them revolving the one way. There is an upper delivery roller for each bolt, and these rollers work up and down automatically and draw the bolts out, making it impossible for them to stick or bind against the saws.

Another important feature of this machine is that the end bearing of mandrel may easily be removed, which permits the saws being taken off for filing.

The E. Long Manufacturing Company have also built a heavy nine-saw lath machine, an illustration of which may be seen in their advertisement in this issue.

Although these machines have only been placed on the market this spring, several pairs have already been placed, and are now in successful operation. There is one pair in Mickle, Dyment & Son's mill at Severn Bridge, another with the same firm at Gravenhurst, and another with the Dyment-Mickle Lumber Company at Whitney.



NEW 7-SAW LATH BOLTER, MANUFACTURED BY E. LONG MANUFACTURING CO., LIMITED, ORILLIA.

THE NEWS

ONTARIO.

Mr. Joseph Gray has acquired property at Peterboro', on which he intends to erect a lath and shingle mill.

Mr. James Coles' saw mill near Osprey was destroyed by fire on May 16th. There was no insurance on the property.

Mr. G. Levigne, who operates a saw mill at Aylmer, has been overhauling his machinery and has installed a new lath machine.

Mr. J. R. Booth has started work on a new sulphite pulp mill at Chaudiere. The building will be of concrete and will cost about $75,000.

Andrew Boyd, of Bracebridge, has recently purchased the Rathbun Company's saw mill at Gravenhurst, and intends to operate the same.

Mr. T. E. Parker has been granted a permit by the Toronto City Council to establish a lumber yard and planing mill on Stirling road, Toronto.

Sparling & Kinee's saw mill near Durham was burned about three weeks ago. There was no insurance carried to cover the loss, which was $3,000.

A company has been formed by the business men of Elmira, to be known as the Elmira Door Factory, where doors, sashes and other builders' woodwork will be manufactured.

Mickle & Dyment have decided to enlarge their factory at Bradford. The output of the factory will also be considerably increased, and new sidings will be constructed into their yards.

On May 4th the saw mill and lumber yard belonging to Mr. McIntyre, and situated in the village of Sleeman, was entirely destroyed by fire, resulting in a loss of $6,000 to the proprietor.

A charter was recently granted to the Gordon Pulp & Paper Company, with a capital of $1,000,000. The shareholders include Messrs. S. G. M. Nesbitt, of Brighton; M. W. Murdoff, Trenton; M. L. Weber, and J. P. Lockhart, of Elmira, and A. I. McKinley, of Sarnia.

Mr. Justice Britton gave judgment last month in favor of the Parry Sound Lumber Company against Flanners & Reeves, lumber merchants, of Toledo, Ohio. The suit was for lumber sold to the defendants, who entered a counter claim on the ground that the plaintiffs had agreed to sell them the entire season's cut, which was not delivered.

The Stacey Sash and Door Factory at Oshawa was totally destroyed by fire on April 26th. The plant had only recently been overhauled and new machines installed, which, together with the large stock of lumber and building material in the building at the time, brought the loss up to about $20,000, with insurance of $7,000. The company will rebuild at once.

Mr. Aubrey White, Deputy Minister of Lands and Forests, has been asked to fix the tolls which the Victoria Harbor Lumber Company should pay the Whitefish River Company for the privileges of floating timber over the slides in the river. The River Company desired to charge 25 cents per thousand feet, which the Victoria Harbor Lumber Company considered too high.

The Folding Box Company, Limited, is the name of a new concern recently formed at Owen Sound. By the charter granted them, they are empowered to operate saw mills for the manufacture of folding boxes, their authorized capital being $49,000. Among those interested in the project are M. Kennedy, N. Ross, A. G. MacKay, H. B. Harrison, James E. Keenan and John E. Keenan, all of Owen Sound.

Dr. F. E. Watts, a special inspector of the Provincial Board of Health, has completed a tour of the lumber camps in the northern districts of Ontario. The object of the inspection was to learn whether the regulations were being carried into effect. Generally the rules are being observed, and only three cases of violations came before his notice. Informations were laid against the responsible parties, and convictions being registered, fines ranging from $5 to $50 and costs were imposed.

THE EASTERN PROVINCES.

It is announced that H. E. Densmore, saw mill proprietor, East Noel, N.S., has assigned.

P. Leveille and J. P. Marion have registered their lumber business at Montreal under the name of Leveille & Marion.

The St. Anne Power Company's saw mill at Beaupre, Que., was destroyed by fire on April 29th. Fortunately, however, the new mill which the company are erecting is nearing completion, so that little delay will be experienced.

The employes of Mr. W. A. Hickson, proprietor of a saw mill at Amherst, N.S., went on strike about two weeks ago in an endeavor to enforce a higher wage scale. It is understood that Mr. Hickson later acceded to the demands and the men returned to their places.

The Quebec Government have recently issued letters patent incorporating J. A. Begin, E. H. Begin, F. Milette, all of Windsor Mills, and others, as the Quebec Manufacturing Company, Limited, with an authorized capital of $16,000. The concern are authorized to carry on a general lumber business.

Application will be made at the next session of the New Brunswick Government for a charter for the Prescott Lumber Company, Limited, of New Mills, N.B. The interested parties include J. Prescott, of Penfield, G. D. Prescott and I. C. Prescott, of Albert, and R. L. Myles and A. W. Barbour, of New Mills.

A Dominion charter has been issued to the St. Simeon Lumber Company, Limited, of St. Hyacinthe, Que. The incorporators include O. Brouillard, of Notre-Dame du Bon-Conseil; M. Archambault, of St. Dominique of Bagot, J. P. P. Robert, of Marieville, and J. A. Tellier, of St. Hyacinthe. The charter empowers the concern to carry on a lumber trade in all its branches, and fixes the capital at $290,000.

MANITOBA, SASKATCHEWAN AND ALBERTA.

Hoge & Thomson, of Saskatoon, Sask., have sold their planing mill business to Morrison, Sheen & McMillan.

Hughes & Company, lumber dealers, of Brandon, Man., have removed to their new brick building, a few doors north of the old office.

The lumber business of E. J. Meilike & Sons, Dundurn, Sask., has been formed into a joint stock company and is now known as E. J. Meilike & Sons, Limited.

The Moose Jaw Lumber & Supply Company has been lately formed in the busy Saskatchewan metropolis. The manager of the new concern is Mr. H. H. Bamford. The company is erecting large sheds and offices on Manitoba street, corner of 8th avenue, where they will carry all lines of coast lumber products. They purpose making a specialty of interior finish.

Some extensive changes are being carried out at the retail lumber yard and planing mill plant at Moose Jaw now owned by the Beaver Lumber Company, of Winnipeg. On the opposite side of the street from the old site of the combined business a new location has been secured, on which large lumber sheds have been erected, also a warehouse and office building, in which the retail lumber selling end of the business will hereafter be conducted, separately, under the management of Mr. L. M. Rosvear, formerly of Lipton, Sask. The old part will be used entirely as a sash and door manufacturing plant, the business being known as the Saskatchewan Sash & Door Company, Limited. The management of this has been entrusted to Mr. J. E. McKee, formerly of St. John, N.B.

BRITISH COLUMBIA.

McPherson & Wilband, formerly of Vancouver, are erecting a saw mill at Abbotsford.

Mr. S. E. Smith, of Victoria, B.C., has received a United States patent on an improved device for detecting any curvature in a band saw.

The new boiler house of the Royal City Planing Mills at New Westminster is nearing completion, and plans are now being made for the erection of new dry kilns.

McDonald's large saw mill at Morrisey was destroyed by fire recently. The loss is said to be very heavy, as everything was destroyed, and no insurance was carried.

It is understood that Messrs. Robertson, Lynch and Boynton, members of the Elk Lumber Company, of Fernie, are negotiating for the sale of some of

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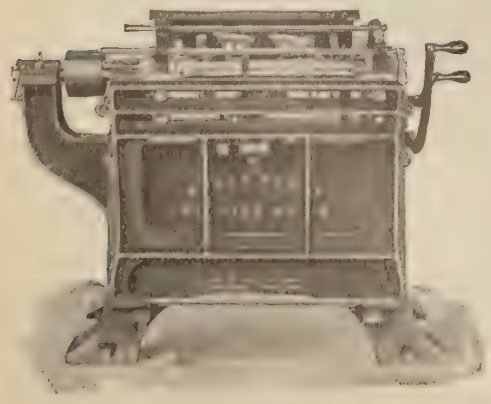
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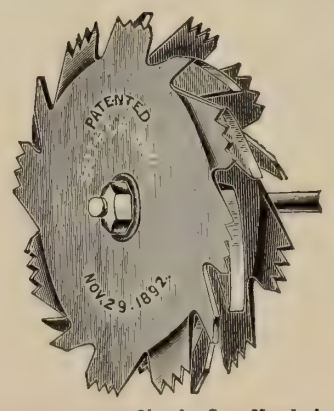

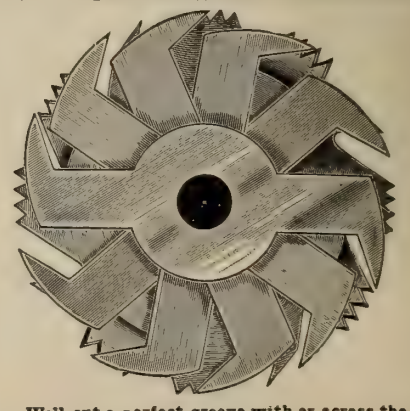
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their timber holdings on Cherry Creek, near Vernon, B.C.

Mr. O. L. Boynton, of Fernie, B.C., and associates, purpose building a mill at Summit Lake, between Nelson and Nakusp, during this coming summer. The concern will be known as the Summit Lake Lumber Company.

Mr. J. A. Martin, of Portland, has been carrying on negotiations with the Nanaimo City Council relative to the erection of a saw mill near Departure Bay. The proposed mill is to have a capacity of 50,000 feet daily.

The Fernie Lumber Company, of Fernie, B.C., have in stock some 7,000 telegraph and telephone poles, ranging from 25 to 40 feet, which they have cut from their limits during the past winter. These are ready for immediate shipment.

Fire did damage to the extent of $15,000 to the Brunette shingle mill at New Westminster on May 11th. About half the loss was sustained on the machinery. A new plant has been ordered, and it is thought that the new mill will be constructed on a larger scale than the old one.

The Robinson-McKenzie Lumber Company, Cranbrook, commenced the season's sawing on Monday, May 13th. During the time the mill had been shut down they made the usual winter repairs, also installing a new Lewry edger. They report a very successful logging season during the winter.

The Staples Lumber Company, Limited, Wycliffe, B.C., recently purchased from S. W. Arbuckle and E. H. Crandall, of Calgary, a cement manufacturing plant situated at Exshaw, Alta., including quarrying rights on 640 acres of land. It is understood that the purchasers will proceed with the development of the deposits.

The Columbia Blower Company, of Nelson, B.C., are installing a three-fan blower and separator system in the new planing mill of the Elk Lumber Company, of Fernie. They are also putting in a 55 inch fan and separator outfit in the planing mill of the North American Land & Lumber Company's Cedar Valley mill, near Fernie.

Mr. C. E. Eckhart, of Vancouver, and Mr. J. Patterson, of Chilliwack, under the firm name of Patterson & Eckhart, have purchased from Mr. R. Brett a mill property and timber limits on Elk Creek. By installing new machinery the purchasers will increase the output of the mill by 20,00 feet per day, and they will also erect shingle and lath mills.

A representative of the Pacific Coast Mills & Timber Company, who was recently in New Westminster, stated that his company had not yet decided on the site for the mill which they intend erecting on this side of the line. The company are opening up an office in Vancouver, which will be in charge of Mr. B. H. Silver, and from which all Canadian business will be transacted.

The Canadian Pacific Timber Company, of Nelson, B.C., re-commenced cutting on April 23rd, and are cutting between forty and fifty thousand feet per day at the present time. When the new boiler and the new edger, now on order, arrive and are installed, the plant will average, it is expected, in the neighborhood of 80,000 feet of lumber per diem. The company's winter crop of logs, now in the water, consists of about six million feet, mostly of cedar.

All of the mills of the Yale-Columbia Lumber Company resumed their summer cutting during the latter part of April. This company operates mills at Nelson, Westley and Cascade in the lower Kootenays, cutting a daily average of 150,000 feet. They expect to soon put on a double shift at Cascade and Westley. They have made some improvements at all the mills, putting a new Cowan moulder and a circular re-saw at the Nelson mill, a similar addition to the Westley plant, and a big Cowan timber sizer at Cascade.

The Creston Lumber & Manufacturing Company, Limited, is the name of a new concern recently organized in the Southeast Kootenay district of British Columbia. The president is Mr. H. A. McKowan, of Cranbrook; secretary-treasurer, Mr. J. H. Hyde, and the general manager Mr. George Cartwright. The mill is located at Erickson, near Ereston, B.C. It contains a circular saw equipment, a four-saw gang edger, with the usual complement of live rolls, slabs, slasher and trimmer saws. It has also a McGregor-Gourlay 16 inch planer and matcher. The daily capacity is about 25,000 feet of lumber. The limits, which are close to the mill, consist chiefly of pine, fir and larch. Most of the output is handled by the Cranbrook Sash & Door Company, of which Mr. McKowan is manager.

The Fernie Lumber Company, of Fernie, B.C., has been making extensive changes and improvements at the mill. They have erected a new boiler house, installed an additional Waterous boiler of 120 horsepower, and otherwise improved the power plant. A new fire pump has also been put in. Both the saw mill and the planing mill have been entirely remodelled, and several new machines installed. A new refuse conveyor, with a 900 foot chain, has been erected, enabling the fire to be located much farther away than formerly. In addition to these inside improvements, they have constructed two miles of logging railroad, running from the Elk River at the front of the mill back into their timber limits. A new engine will be added to their equipment during the summer. The company commenced cutting for the season on April 22nd.

On March 19th sawing for this summer's output was resumed at the Adolphe Lumber Company's mill at Baynes Lake, B.C. During the winter several additions were made to the plant, which was itself completed only last summer. These additions consisted of the installation of a five-saw Waterous edger, and a new Waterous boiler 60 inches by 14 feet. They also put in an electric lighting plant, consisting of a 110 light Canadian General Electric dynamo, which is operated by an 8 inch x 10 inch Waterous engine. This plant is located by itself in a specially constructed building, steam for the engine being supplied from the mill boilers. During the winter the company took out about four million feet of logs, and will continue logging operations all summer, as they are cutting at the rate of 1,000,000 feet of lumber per month. They purpose constructing a logging railroad this summer from the mill into the limits.

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Saw Mills and Planing Mills located on C. P. R and Ottawa River 70 miles west of Montreal

GRADING RULES OF THE NORTHERN PINE MANUFACTURERS' ASSOCIATION FOR LATH.

Owing to the rapidity with which lath are manufactured and necessarily handled in grading, the misplacement of an occasional piece is practically unavoidable. For this reason a variation of 10 per cent. or less off grade is provided for in our rules. This provision is intended to cover accidentally misplaced pieces only, and every reasonable effort should be made to have the rules conform to the specifications without regard to this percentage provided for misplaced pieces.

No. 1 White Pine Lath.

1. No. 1 white pine lath shall be butted to not less than thirty-one and three-fourths inches or forty-seven and three-fourths inches long; not more than one-eighth of an inch scant or one and one-half of an inch wide; and not more than one-sixteenth of an inch scant or three-eights of an inch thick; and of sound material.

2. Will admit wane one-third the thickness, and one-third the width for one-third the length and one side of the piece or its equivalent otherwise located, when not in combination with other serious defects.

3. Three or four three-quarter inch knots well scattered, or more smaller knots, all well set, firm and sound, that do not weaken the piece, and any number of pin knots, are admissible in a 4-foot, and a proportionately less number in a 32-inch No. 1 lath.

4. Firm, fine shake extending over one-half the surface of the piece that does not materially impair its strength is admissible when not in serious combination with other defects.

5. A few worm holes in an otherwise sound piece are admissible.

6 Stain shall not be considered a defect, although mold that has caused the surface of the piece to decay or scale off is a defect not admissible in this grade.

7. Ten per cent. or less of No. 2 lath shall be allowed in this grade.

No. 1 Mixed Lath.

No. 1 mixed lath shall be graded by the same rules and specifications and subject to the same percentage of No. 2 given for No. 1 white pine lath and may consist of a mixture in any proportions of any two or more of the following named woods: White pine, norway pine, jack pine spruce and balsam, and not to exceed 20 per cent. of tamarack.

No. 2 Lath

1. No. 2 lath may consist of any one or a mixture of any proportions of any two or more of the following named woods: White pine, norway pine, jack pine spruce, balsam and tamarack.

FACTORY FOR SALE

THIS Brick Factory for Sale, located at Orangeville, Ont., a town of about 4000 population, on the Canadian Pacific Railway, about 46 miles from Toronto, right in the way to Owen Sound, splendid for shipping goods through to the Northwest, and on account of being in such close proximity to Toronto, might be almost recognized as one of Toronto's suburban towns. Might also just say that the C.N.R. is surveying through Orangeville at the present time, on the way to the lakes, to look after western trade.

This factory, situated three blocks from the market square, in Orangeville, has about 18,000 square feet of floor space, with a most modern dry kiln, that will take over 30,000 feet of lumber at once. It is equipped with all kinds of modern woodworking machinery, all set up ready for running. All you have to do is to set the furnace going, turn on the steam, and round go the wheels. It is situated in one of the best labor-producing sections in the country, there being no other industries there to monopolize the labor. From what we can understand there is lots of female as well as male labor to be had.

We are informed that surrounding Orangeville there is considerable timber cut in small quantities by small mills in the way of basswood, maple, ash, considerable elm and some oak, which can be purchased in Orangeville for about ⅓ the price it can be procured for in Toronto on account of timber there not being manufactured on a large scale. There is no doubt but what this factory would make a splendid factory for cabinet-work, piano or wood novelties, or special wood work of any kind, on account of its close proximity to Toronto, the great market for this class of goods, and on account of the very low price of timber and labor there.

If anyone wants a snap in the way of a good brick factory, with all equipments, for a very small investment, now is the time to speak, as we feel confident you will never have another chance like this again in a lifetime. It came into our possession about 10 days ago, and as we have no earthly use for it, and on account of the way we purchased it, are willing to let it go for a mere song.

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SILVER Plating Plant consists of all kinds of solutions, machinery and apparatus for plating all kinds of metals. Also have 8 sets of copper glue pots with piping complete. Each set of glue pots consists of three copper pots, two users and one in the centre, larger, for boiling.

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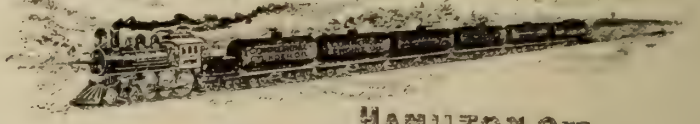

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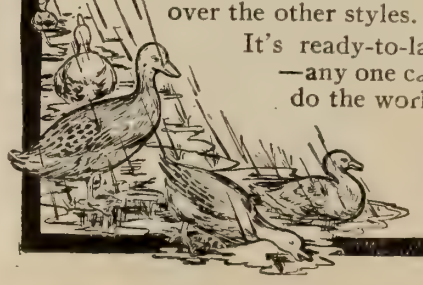
First of all remember the name—Am-a-tite.

It's worth your while because it is the real mineral surface roofing that everyone who sees buys. It's the winner in Ready-Roofings, and a vast improvement over the other styles.

It's ready-to-lay—any one can do the work.

It's rainproof, wind and weather-proof—outwears all other kinds, is less expensive, and, most important—it never requires painting or repairs.

That is a pretty broad claim, but we can back it up to the letter. But don't take our word for it. Send in your name and address to-day and we will send you the proof—an illustrated booklet and free Sample. Once you see the roofing itself you will not wonder why everyone is buying it. Write to-day.



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2. Pieces of No. 1 quality with an average of not more than one-fourth of an inch scant in width and one-eigth of an inch scant in thickness are admissible.

3. No. 2 lath may contain many firm streaks and patches of rot; sound knots; an occasional loose knot or knothole; dead wood, worm holes, wane, season checks, shake and pitchpockets, that by themselves or in combination with these or other defects do not seriously impair the usefulness of the piece.

4. Both ends of No. 2 lath should have at least an inch in width of firm wood for nailing.

5. Ten per cent. above or below this grade is admissible.

INCREASED NUMBER OF FIRE RANGERS.

In pursuance of its policy of guarding the great timber wealth of the Crown in the territory where the pine is unsold, the Ontario Department of Lands, Forests and Mines will very shortly station fire rangers in various sections of the province. The staff along the Temiskaming & Northern Ontario Railway has been placed on duty already for the present season. It will number eighty-one, in three parties, and will supervise the line from North Bay to the junction of the Grand Trunk Pacific, a distance of over 200 miles. The extension of the road from Englehart to the latter point made necessary the employment of the third party.

Into Temagami Forest Reserve, which is 5,900 square miles in area, many prospectors have gone since the discovery of silver. This has necessitated a substantial increase of the staff to see that the mining and prospecting are carried on in such a way as not to endanger the large quantity of pine and timber there. Mr. Booth, the leasee of the Montreal River pulp concession, is putting ten rangers on duty, so that there will be fifty all told in the reserve, in addition to those on the railway line. In the Metagami end of the reserve fifteen rangers, the same number as last year, will be stationed. In the Mississauga reserve, 3,000 square miles in extent, there is a large body of magnificent pine, which will be guarded by fifteen rangers.

In the Nipigon reserve twenty rangers will be on duty. The chief ranger is Mr. P. A. Leitch, who is thoroughly familiar with the serve, which comprises 7,000 square miles. In the Rainy River district, particularly in the Quetico region, there is a body of pine variously estimated at from 800,000,000 to 1,000,000,000 feet board measure and in this region a force of ten or twelve rangers will be placed on duty to patrol it and see that due care is observed by those who travel through it. Rangers will also be placed on the line of construction of the G. T. P. west of Port Arthur, and along the lines of construction of the C. P. R. and C. N. R. from the French River south to Parry Sound. North of Lake Nipissing and south of the Temagami Forest Reserve there is a large body of pine timber of fine quality, and in this area some twelve experienced rangers will be placed to exercise supervision over prospectors, miners, tourists, etc. The same staff as last year will be on duty in the Eastern Forest Reserve and in the Sibley Reserve.

In addition to the rangers above appointed, there will be a staff of probably 300 fire rangers on licensed berths. These rangers are nominated by the timber licensees and appointed by the Department.

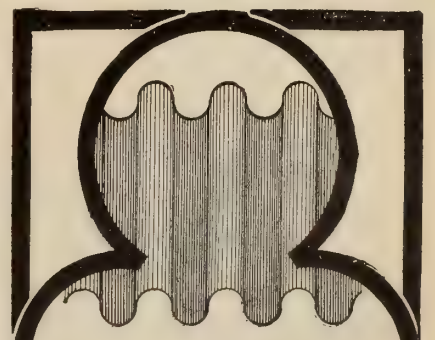
A UNIQUE FLOATING SHINGLE MILL.

Tacoma, Wash., April 6th — The most unique shingle mill in the Northwest, and perhaps in the world, is being built by J. B. St. Louis, who had less than two years ago a small plant on the tide-flats. He was burned out. In one sense his new mill, which will have a capacity of 75,000 shingles a day, will be a vessel, and it will be so classed by the customs officials. The little mill will be on scows and will be towed around the Sound, anchoring where shingle bolts are to be had. The machinery is ready and Mr. St. Louis is now building the four main scows, one to go under each corner of the plank platform upon which the plant will stand. The scows are being constructed on the waterfront at the foot of Fifteenth street, near the city dock. Each scow is 20 feet long, eight feet wide and five feet deep. They will be securely fastened together with heavy timbers in such manner that a space of eight feet will be left between the scows. Then a floor will be built connecting all the scows.

The floating plant will be equipped with a water tube boiler, which will be suspended between the forward pair of scows. All the machinery necessary to equip a small shingle mill will be found in this plant. As the operators will not be permitted to dump the refuse into the Sound, a floating burner will have to be built. Some distance from the main plant will be attached a float, on which the waste will fall from the conveyor and be burned. This float will be submerged so that the surface will be barely under water, thus protecting the float from the flames. Around it will be erected an iron fence to keep the embers from washing away.

Mr. St. Louis will build a roof over the four scows. This will be 44 feet long and 26 feet high. The saws and packing machines will be so placed, so Mr. St. Louis says, that not an inch of space will be wasted. As fast as the shingles are packed they will be loaded on scows, which will be towed to Tacoma, where the finished product will be transferred to sailing vessels.

"This will be one of the most economical mills in the country," said Mr. St. Louis to the Tacoma News, "as a crew of only seven men will be required to run it."



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Any desired size or gauge—galvanized or painted—straight or curved.
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PERSONAL.

A dreadful accident occurred at the Rainy River Lumber Company's mill at Fort Frances, Ont., on May 11th, when Mr. T. Caton, assistant millwright, was caught in the shafting and whirled to his death.

As the result of being thrown from his carriage while driving on May 11th, Mr. Phillip Audet, manager of the Connell-Audet Lumber Company, died at his residence at Mont Tremblant on the 12th of May.

Mr. S. Ashfield, manager of the Northwest Lumber Company, Union Bank, Winnipeg, arrived back from California last month, where he went on a visit. Mr. Ashfield is the picture of robust health, and is right in the lumber swim.

Mr. Arthur Perry, of Perry & Black, who operate a saw mill near Fergus, Ont., met with a painful accident about three weeks ago, when two fingers on his right hand were severed through coming in contact with a saw of a lath machine.

Mr. J. L. Murray, one of the pioneer lumbermen of Muskegon, Mich., and formerly of Stratford, Ont., died at his home in Detroit on May 5th. Deceased was a member of the firm of Murray & Eyke, lumber inspectors, and was also a Government pier inspector.

Mr. Charles T. Cooney, manager of the Saginaw Lumber & Salt Company at Windsor, Ont., was recently tendered a farewell banquet at the Crawford House, when he was presented by his friends with a silver service. Mr. Cooney is removing to Thessalon, owing to the change in the location of the company's mill.

P. PAYETTE & CO.

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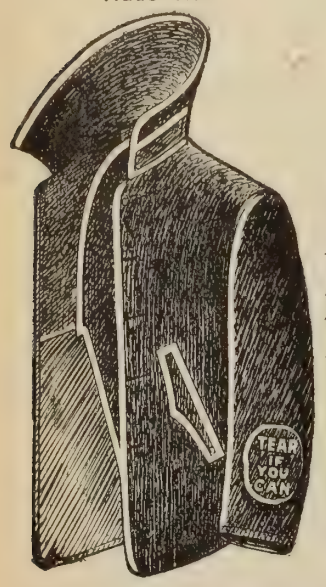

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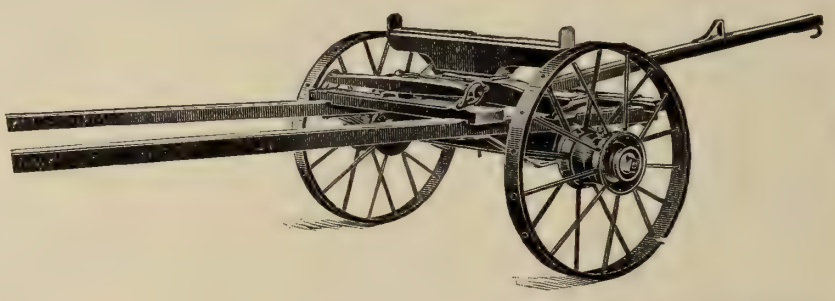
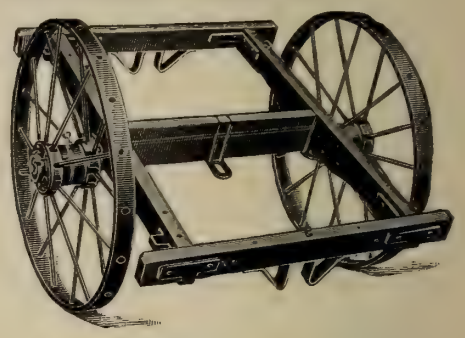
With wide tire steel wheels, for Saw Mills, Planing Mills, Lumber Yards, etc.





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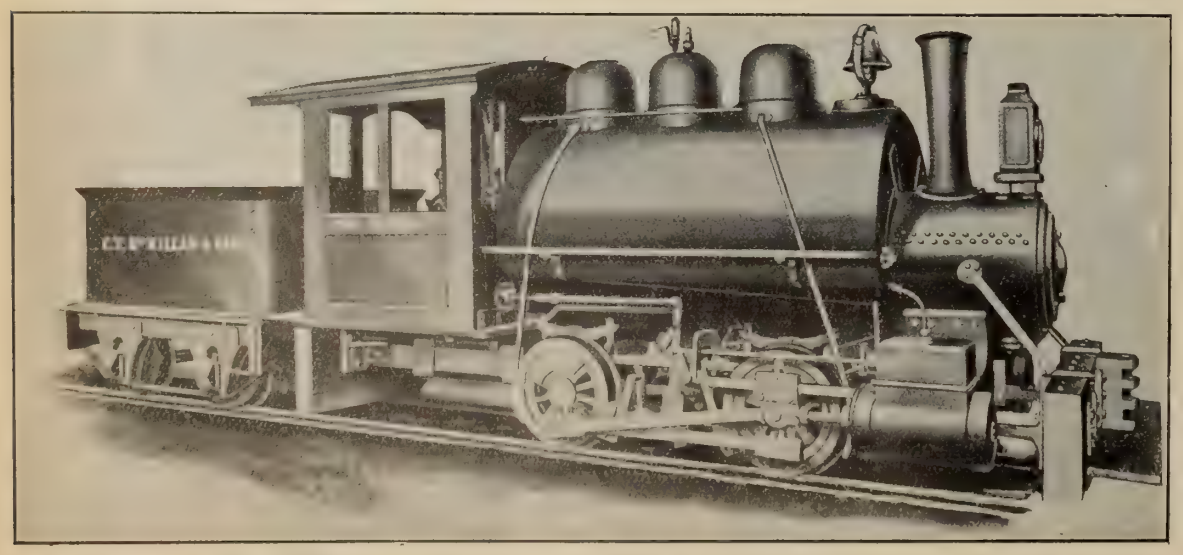

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Louisiana Red Cypress
Is the Best Wood

for interior and exterior finish-in-the-construction-of-all kinds of buildings.

It has a beautiful grain and when stained or finished in its natural color presents an elegant appearance.

It will take paint better last and longer than any other wood.

Mackenzie, Goldstein & Biggs, the well known Architects of New Orleans, say:

"Our experience with Cypress has been such that we invariably persuade our clients not to use hardwood in trimming up the interior of their houses, but to use Cypress.

"To the uninitiated and those that have never seen a house trimmed up in Cypress and treated with stains and properly finished this may sound as if we were "Old Fogies" in our ideas, and not strictly up to date; however, notwithstanding the criticisms that were originally made in regard to our specifications calling for Cypress as above, we have come out on top with flying colors, for the simple reason that there is in our estimation absolutely no woods that have as pretty a grain and that show up to better advantage than Cypress if properly handled on the interior.

"Now, so far as exterior work goes we appreciate the conditions that you have to contend with in other sections where Cypress is not native, and we can say only this much, that if you once properly introduce Cypress of any kind for purposes of special value, it will talk for itself and every customer that is shown it will be a walking advertisement.

"In our estimation Cypress is the best wood for places where moisture is, and it absolutely will not rot. It is also good for exterior work for the same reason. There is no wood that will take paint better, and we have proven conscientiously for our own satisfaction that it is a ***better*** wood than ***Poplar*** or ***White Pine*** for ***white or enamel finishes.***

"As far as greenhouses and tanks are concerned, it is absolutely without a peer; in fact it is the best kind of wood to use for buildings for the above purposes."

WRITE US

Louisiana Red Cypress Company

CAPITAL $1,000,000

FRANKLIN GREENWOOD, General Manager.

HIBERNIA BANK BUILDING NEW ORLEANS, U. S. A.

PUBLICATIONS.

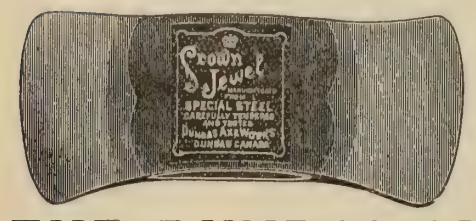
We are indebted to the Lumber Underwriters, 66 Broadway, New York, for a very artistic calendar, printed on birch bark. This company confine their business to fire insurance on lumber and lumber-working plants exclusively.

A new catalogue has just been issued by the Morton Dry Kiln Company, of Chicago. It contains considerable information regarding the drying of lumber and the Morton moist air down-draught system in particular. The company report a large volume of business.

Messrs. J. J. Turner & Sons, of Peterboro', Ont., are well known as manufacturers of tents, awnings, etc. They make a specialty of lumbermen's supplies, and have recently issued a very complete catalogue, a copy of which may be obtained for the asking.

We have before us catalogue No. 57-B just issued by the Jeffrey Manufacturing Company, Columbus, Ohio, extensive manufacturers of conveying machinery for saw mills, lumber mills and woodworking establishments, which should be in the hands of every user of such apparatus. It is profusely illustrated with photographs taken of Jeffrey machinery in operation.

CROWN JEWEL



The Dundas Axe holds first place with Lumbermen. It not only pleases the chopper by its shape and finish but as one Lumberman said, "I do not need to buy so many axes now I use the Dundas Axe."

THE DUNDAS AXE WORKS
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Perfect
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GET THE GENUINE HOE CHISEL-TOOTH SAW
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Large Centrifugal Pump and Pulsometer, in first-class condition, complete with foot-valve and hose; no reasonable offer refused.

Screw Cutting Lathe, 10 ft. bed, 16" swing, very little used; in fine condition, a chance to secure good modern Lathe at a bargain.

Also large Drill and Slotter, 24" Swing, in first-class condition.

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RESAWING MACHINE

As can be seen by the engraving, the frame is cast in one piece. The legs of cast iron are cast in one piece with the saw bench. This makes an extremely substantial machine.

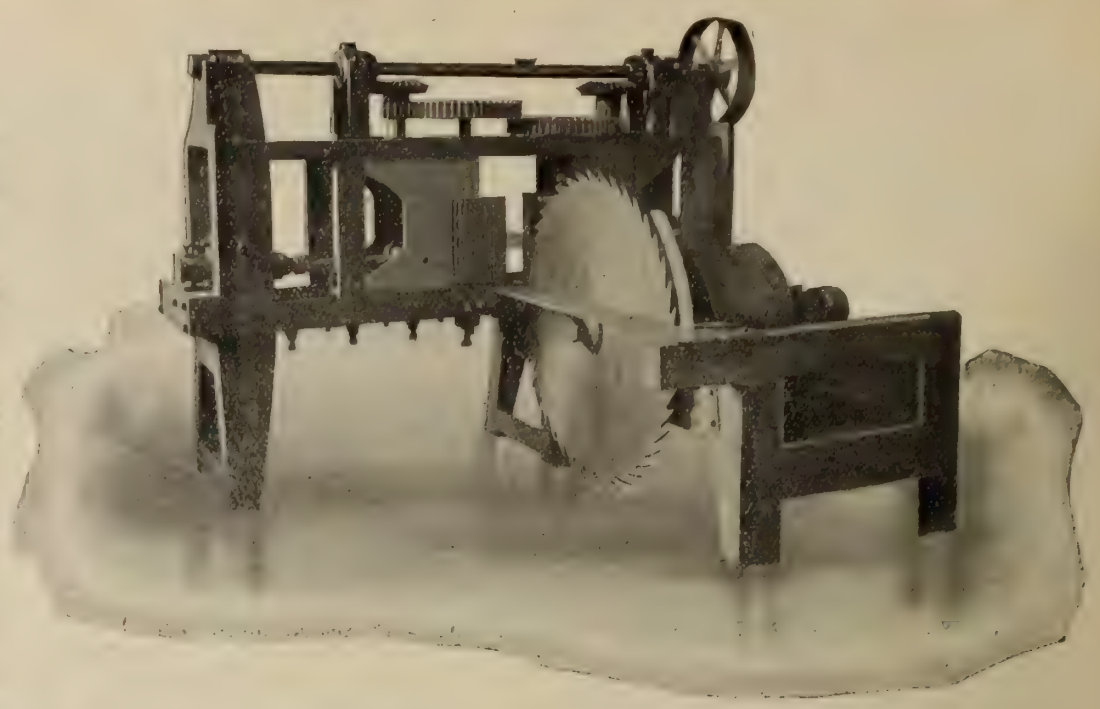
The feed rolls 12" diameter are driven by cut gears 16" in diameter. The proportions of the gears are such as to give a powerful driving mechanism.

The arrangement to set the stationary roll (not shown in the cut) is very accurate, quick and reliable. The clear distance between the slides is 19."

The steam press is of improved construction and has a travel of 10"

The saw is 42" and saw arbor bearing is set in slide so that saw can be brought closer to the rolls, as it wears.

The weight of the machine s 3,000 lbs.



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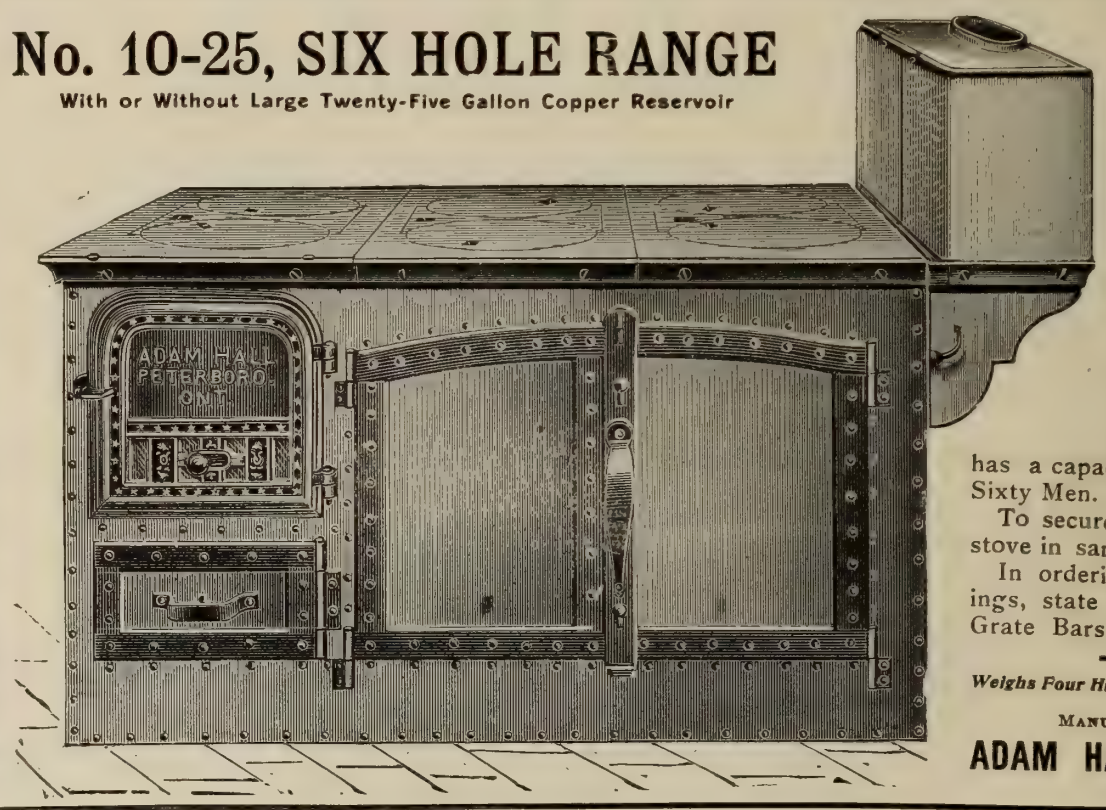

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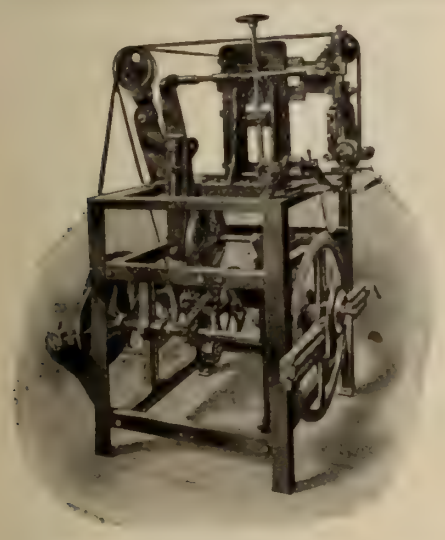

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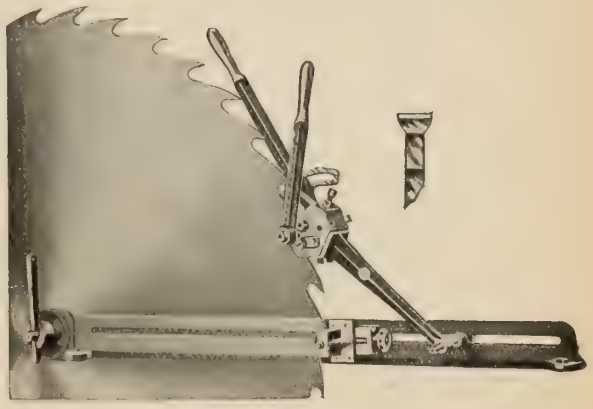

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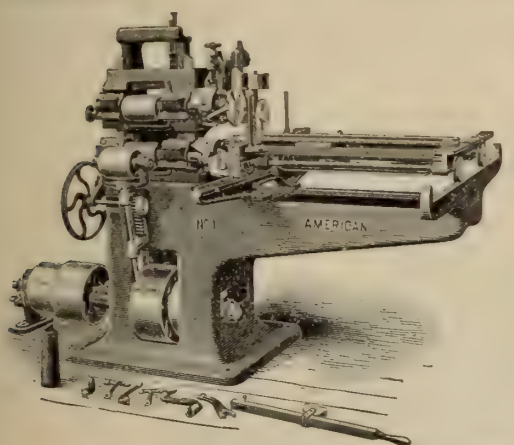

Fig. 9421—No. 1 American Tenoner.

American Woodworking Machinery Company

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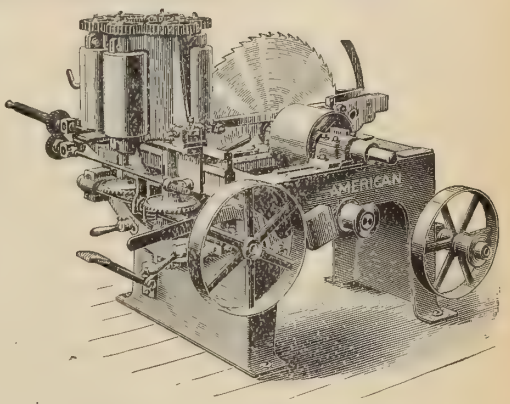

Fig. 539—No. 6 Hoyt 32" Re-Saw.

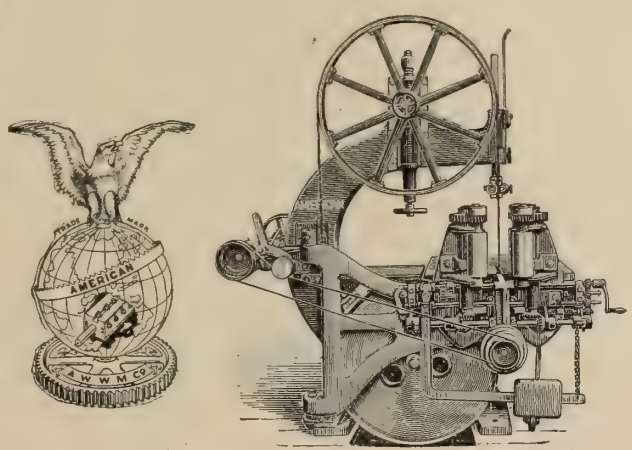

Fig. 503—No. 4 Williamsport 40" Band Re-Saw.

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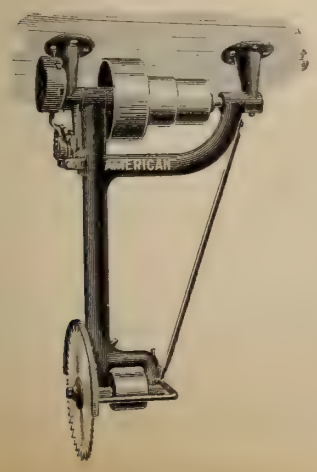

Fig. 604—Houston Heavy Swing Saw.

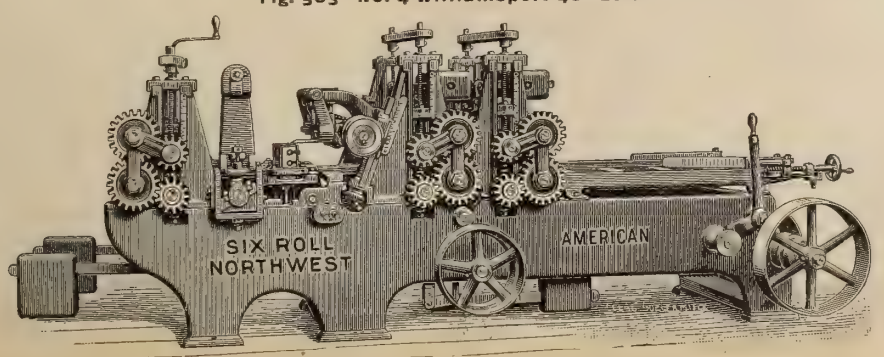

Fig. 6783—Six-roll New Northwest 26" by 8" Planer and Matcher.

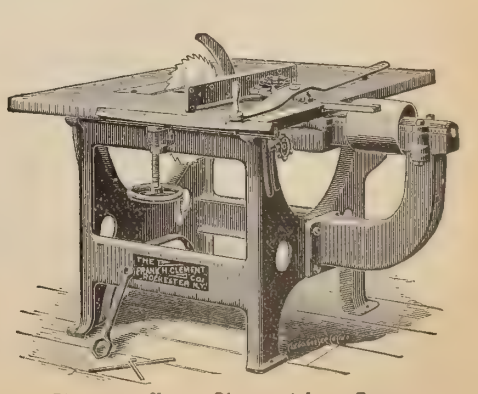

Fig. 575—No. 2 Clement Iron Frame Rip Saw.

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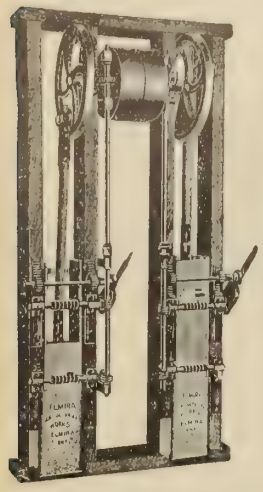

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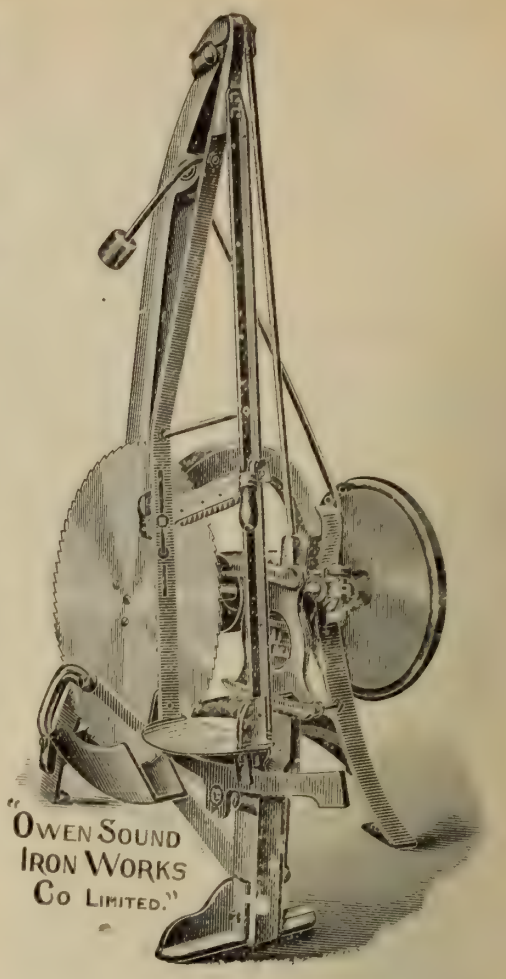

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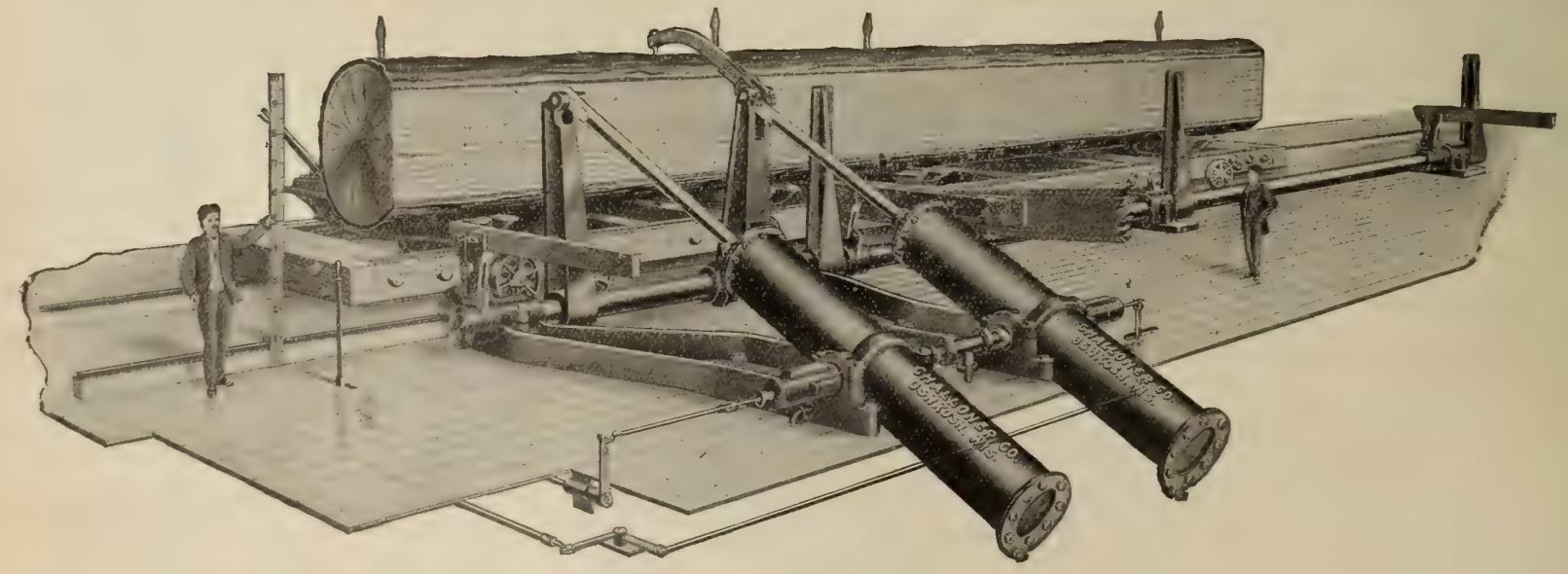

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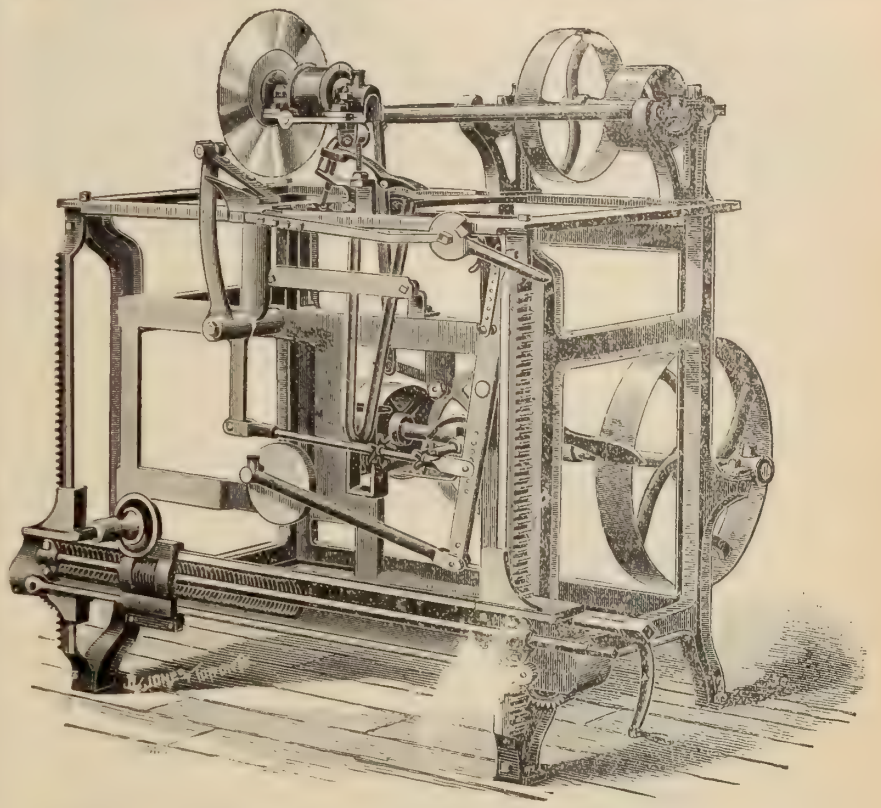

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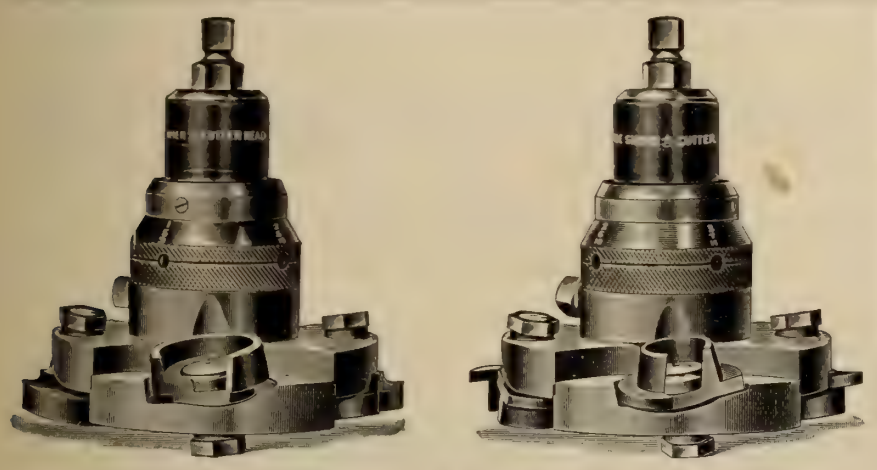

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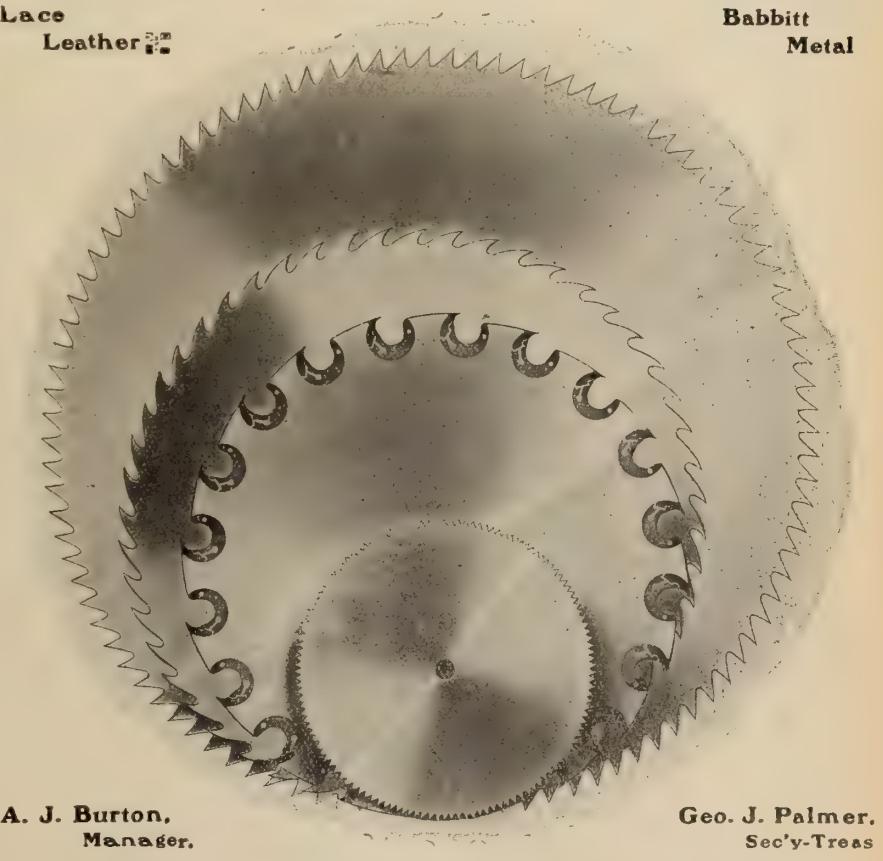

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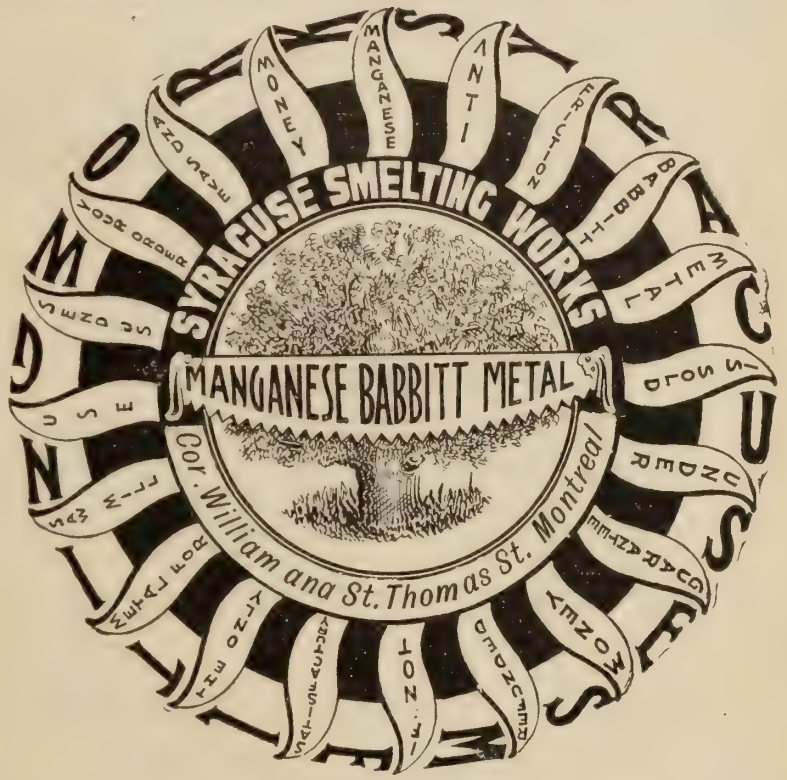

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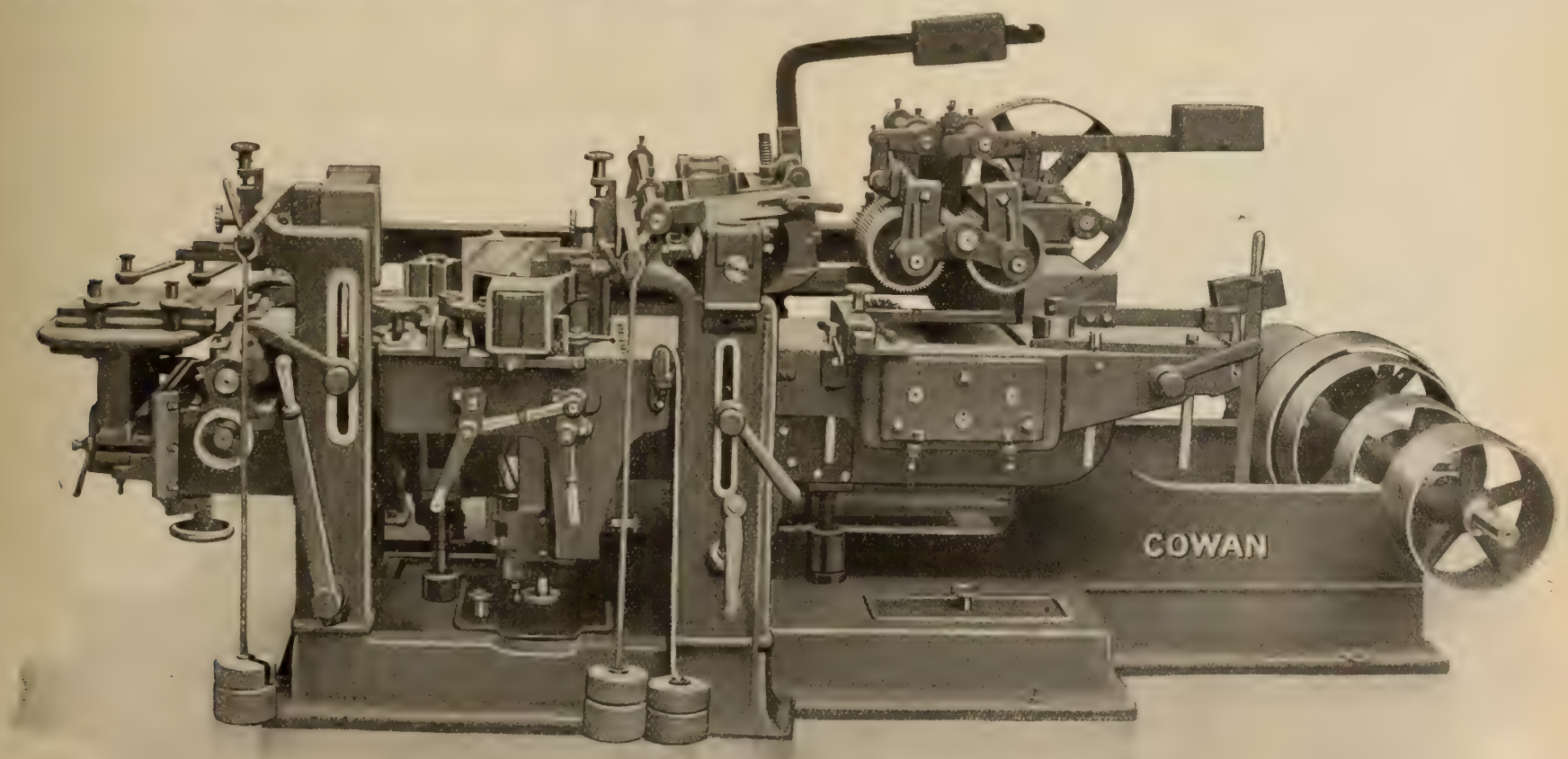

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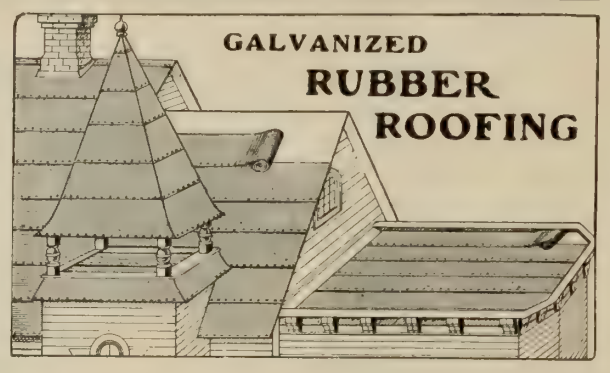

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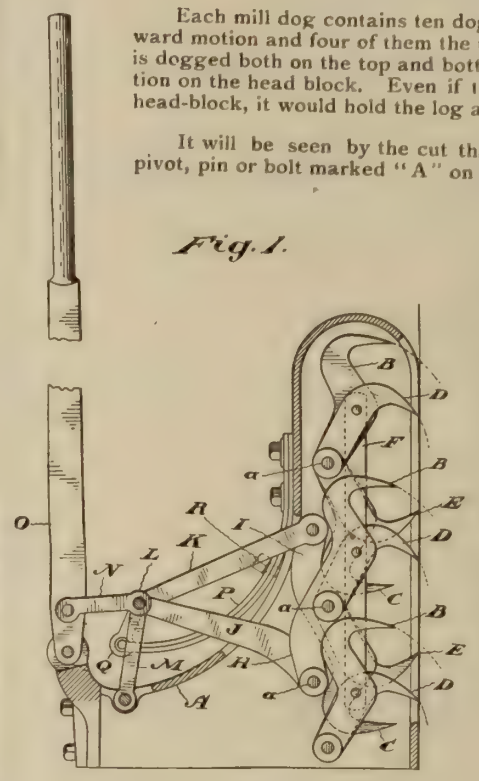
It will be seen by the cut that these ten dogs are fastened on the pivot, pin or bolt marked "A" on the cut, and connected with link bars from the principal dog to the lever "O," which operates all the dogs.

Fig. 1.



There are five of the dogs which project more than the others, about two inches from the head block, and called the log dogs; and five which project about ⅝ inch from the head-block, and called the board dogs; but when dogging a board or a plank or a stock, all the dogs come evenly out of the head block, about ⅝ inch, so that in dogging a board or a stock, both the log dogs and board dogs grip it, providing that the stock or board is wide enough to take all the dogs.

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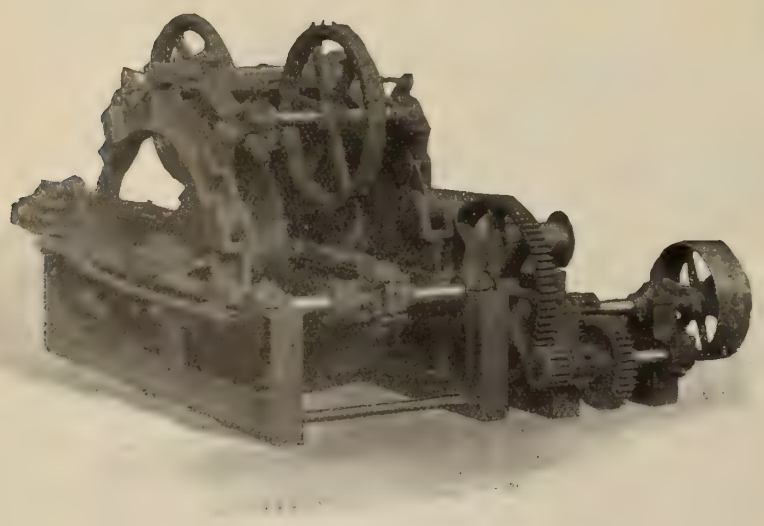

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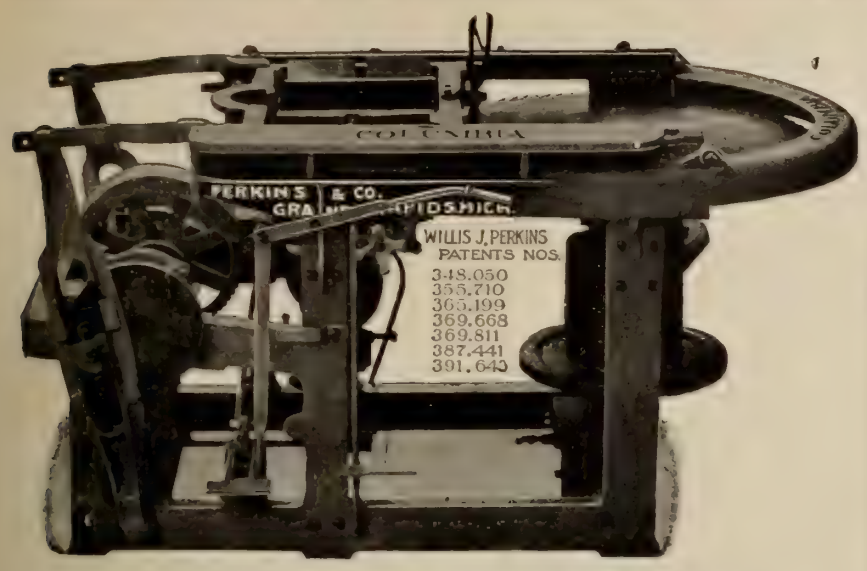

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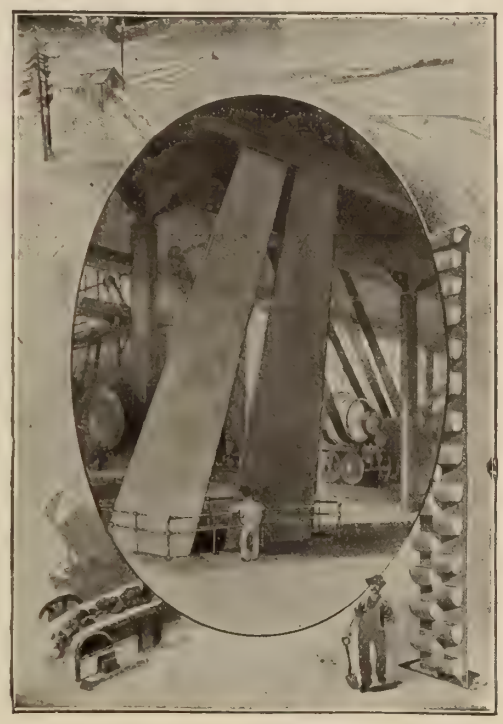

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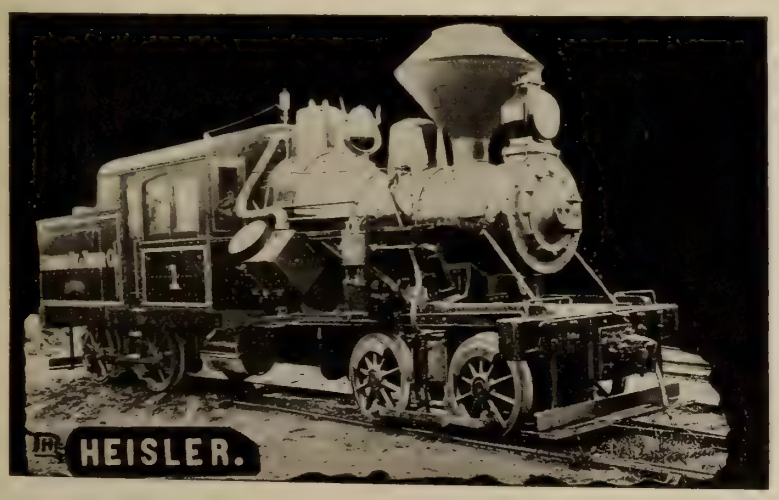

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FOR SHARP CURVES AND HEAVY GRADES

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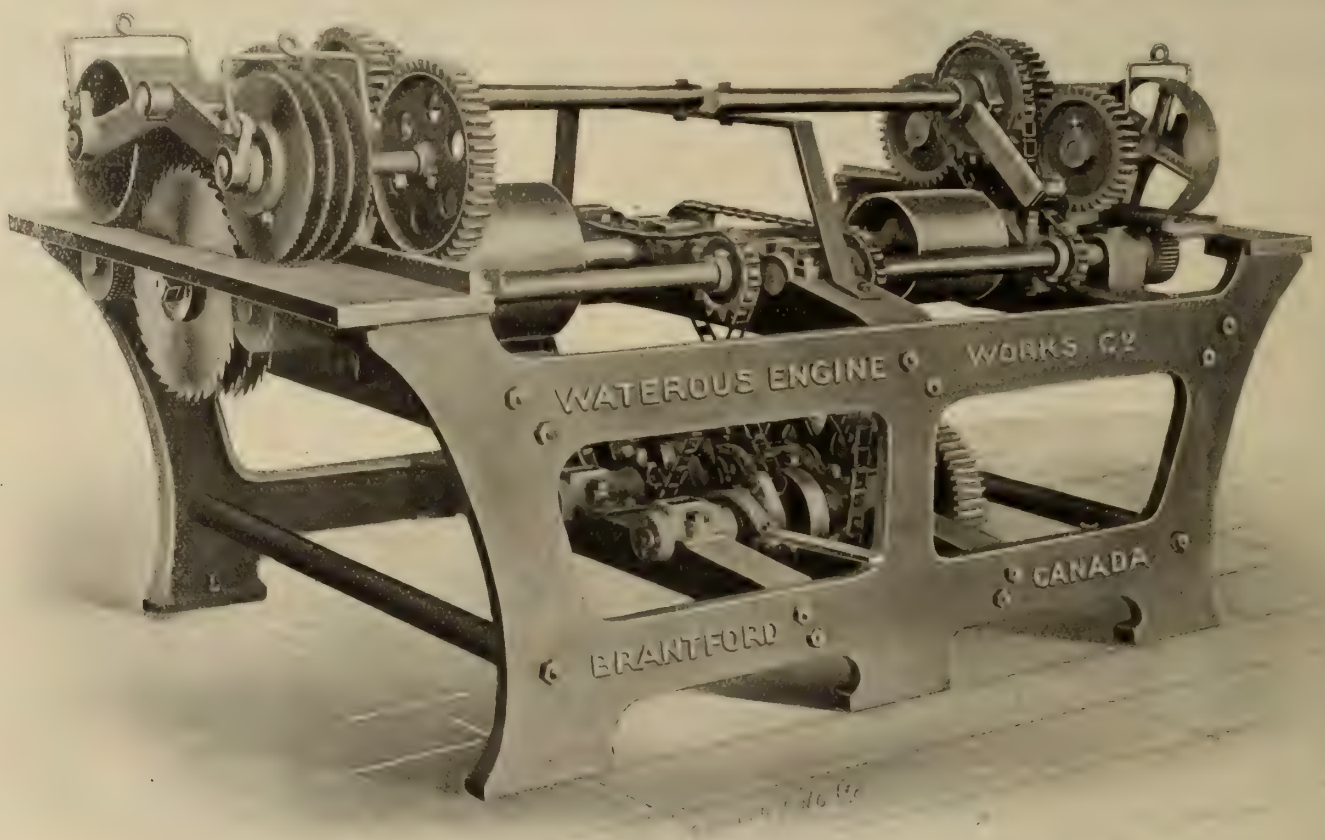
The Waterous Heavy Improved Combined Lath Mill and Bolter

With Independent and Adjustable Feed. All Rolls Upper and Lower Power Driven.

Two idler pulleys supplied, enabling lath saws to run reverse to bolter saws. Capacity, 50,000 lath per day.



Independent Lath Mill

With Independent Feed

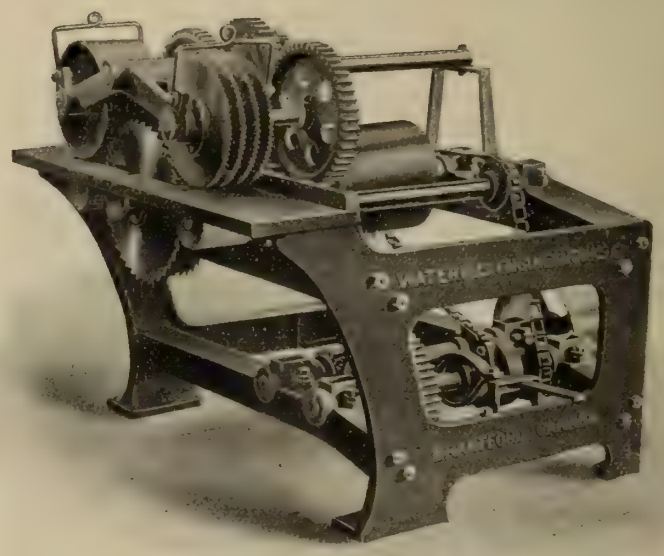
This feed can be started or stopped at will of operator as it is driven from counter shaft and not from mandrel.

The Bolter

is an exactly similar machine.

We also make a

Lath Buncher and Trimmer



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For Attachment to Any Flooring Matcher Running Flooring Face Up or Down.

Above cut shows machine boring flooring run face up. Our boring machines have been on the market for the past ten years, and are well known to be the best machines on the market for their purpose. Since fast-feed matchers have come into use, it may be said that they are the only boring machines that can be used as an attachment. They require no floor space and there is no extra cost for handling.

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for attachment to any flooring machine, to bore jointed flooring.

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No logging outfit is complete without a supply of reliable veterinary remedies. Getting the wrong kind means the loss of the use of your horses when time is valuable.

Johnson's Veterinary Remedies are guaranteed never to fail when used as directed. You get your money back if they ever do.

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A penetrating Alcoholic Liniment. Put up in one gallon jugs, with full directions, per imperial gal. $4.50

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A combination of the best oils used as liniments, imp. gallon . $3.00

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Positively the best all-round healing ointment made. In use by the largest owners of horse flesh in Canada. Put up in 2 lb tins, each . . $2.25 or in ¼ lb tins, per dozen . . $3.50

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In addition to our Veterinary Remedies we make a line of medicines for lumbermen, including a strong, penetrating liniment, healing ointment, cholera cure, liver pills, cough syrup, in fact anything in the form of Camp Drug Supplies. We know that there are no better remedies made than those we offer. There may be others nearly as good, but they lack our guarantee. Satisfaction or money back. A trade discount of 10% allowed off all orders amounting to $100.

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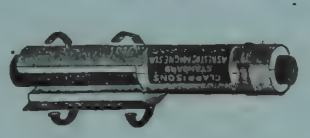

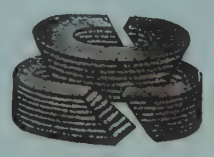

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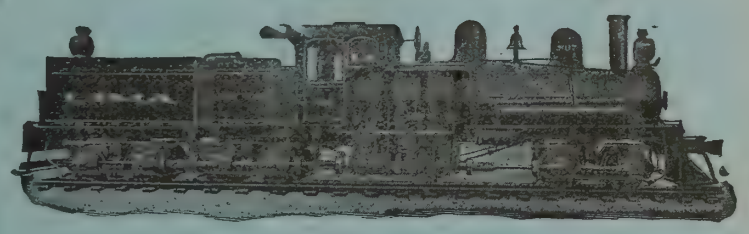

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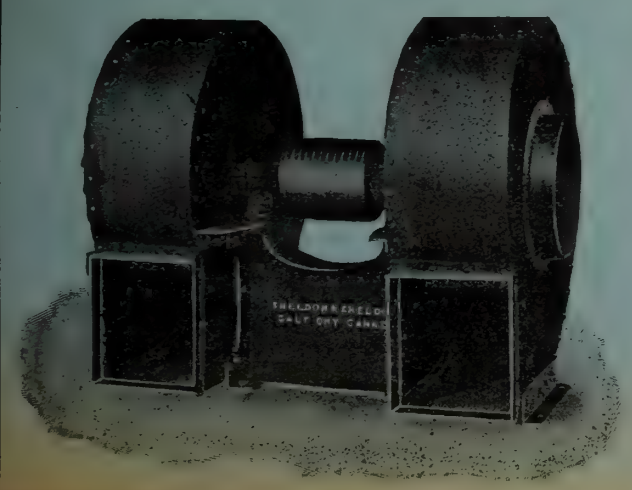
105 E. Second Street, LIMA, OHIO., U S. A.



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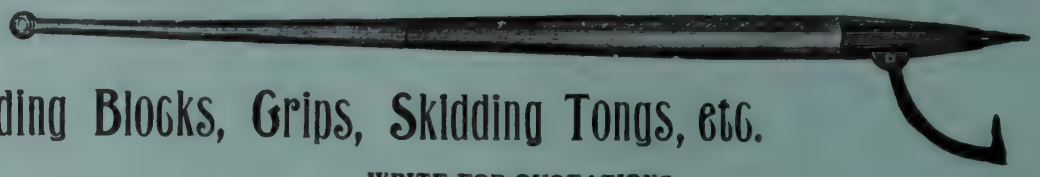

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TO MILL MEN

SOMETHING NEW

You will find that by using

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you will save more than half the time usually lost in lacing belts. Consider—

How much do you lose every year by reason of machinery standing idle while belts are being laced.

You can stop over half of that leak by using the above named tools for running leather laces into belts. They will be sent to any address in Canada by mail on receipt of price with order, and with ordinary care they will last a life-time. *Price 50 Cents Each.*

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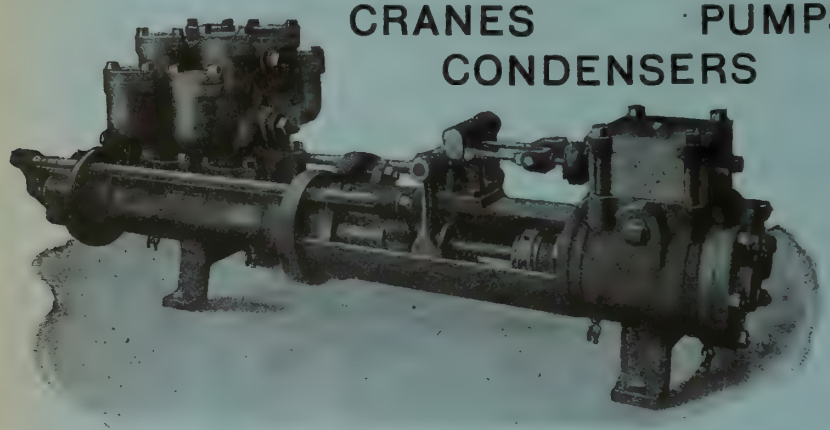

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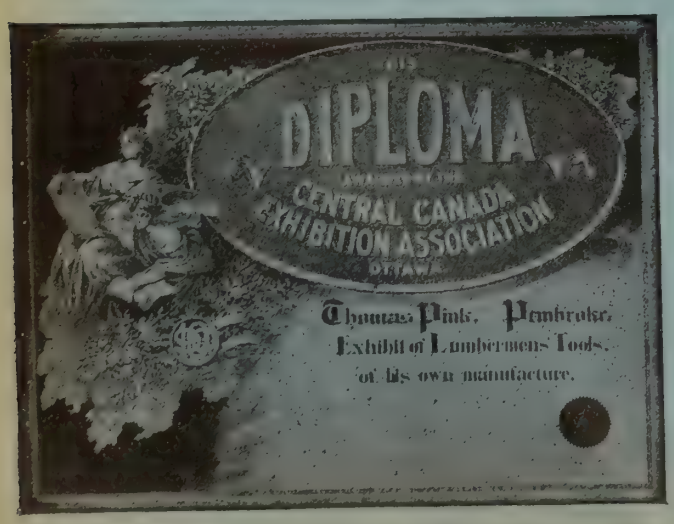

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In Every Province of the Dominion, New Zealand, Australia, Etc.

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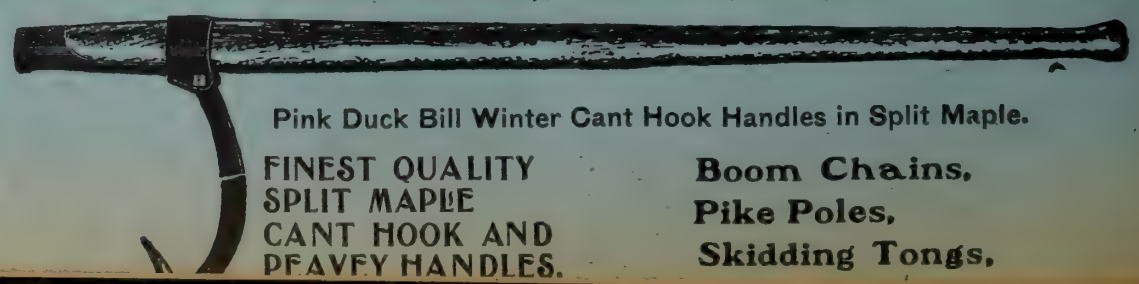

Pink Duck Bill Winter Cant Hook Handles in Split Maple.

FINEST QUALITY SPLIT MAPLE CANT HOOK AND PEAVEY HANDLES.

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FLEUR DE LIS
ANTI-FRICTION METAL

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Excels in Transmission Power
Always Uniform.
LARGE STOCK ON HAND

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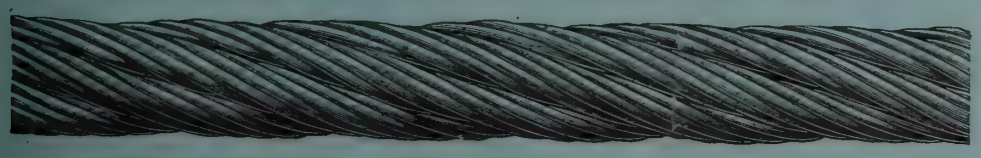

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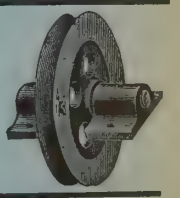

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For the WET PLACES in the SAWMILL

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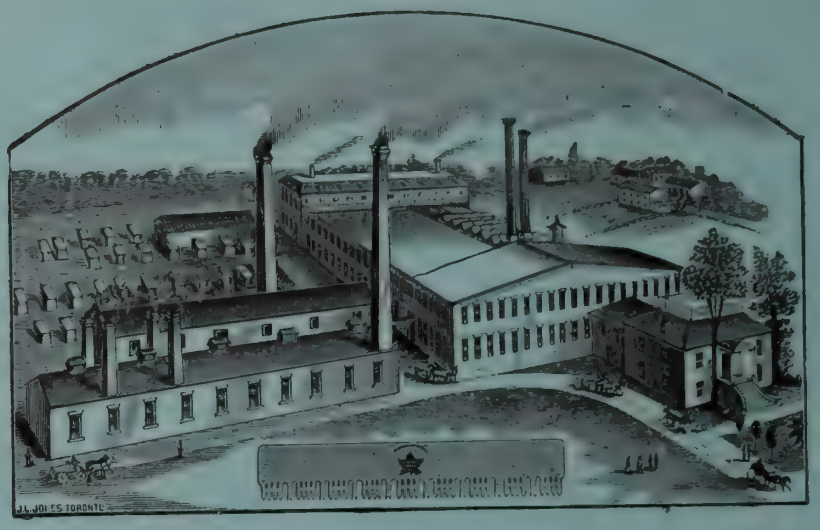

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Save Labor — Save Gumming
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This Saw Stands Without a Rival

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FASTES CUTTING SAW IN THE WORLD!

Its Superiority consists in its Excellent Temper. It is made of "Razor Steel," which is the finest ever used in the manufacture of Saws. We have the sole control of this steel. It is tempered by our secret process, which process gives a keener cutting edge and a toughness to the steel which no other process can approach.

Maple Leaf Saw Set

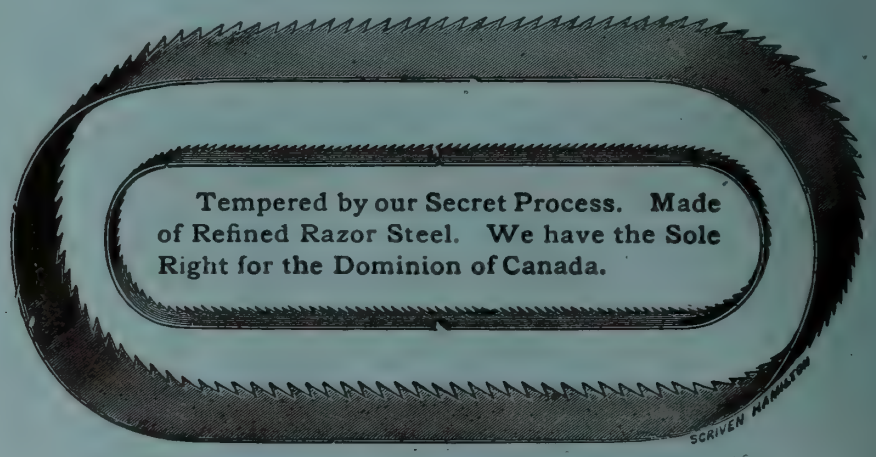
MANUFACTURED BY

SHURLY & DIETRICH, Galt, Ont.

Directions.—Place the set on the point of tooth, as shown in the accompanying cut, and strike a very light blow with a tack hammer. If you require more set, file the tooth with more bevel.

If you follow directions you cannot make a mistake. Be sure and not strike too hard a blow, and it will set the hardest saw. **On receipt of 40 cents we will send one by mail.**

We are the only manufacturers in the world who export Saws in large quantities to the United States.


Tempered by our Secret Process. Made of Refined Razor Steel. We have the Sole Right for the Dominion of Canada.
SCRIVEN HAMILTON

We Manufacture

HIGH GRADE BAND SAWS

Of All Widths and Lengths.

These Saws are made of Refined Razor Steel, and tempered by our Secret Process; for Fine Finish and Temper are not excelled.

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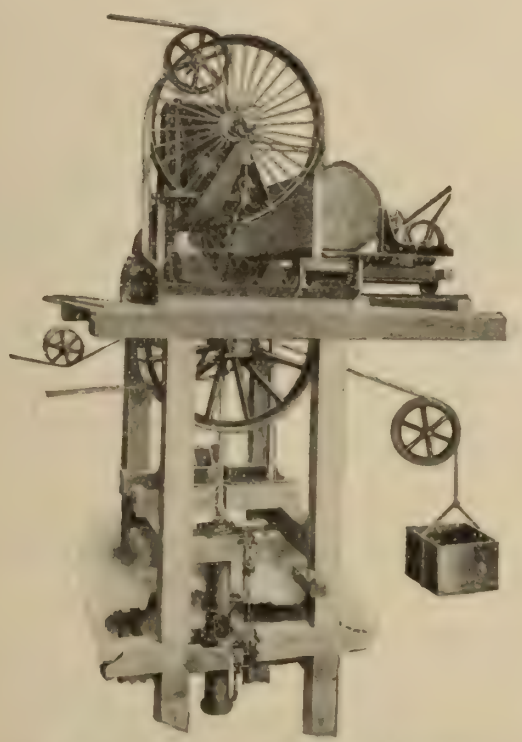
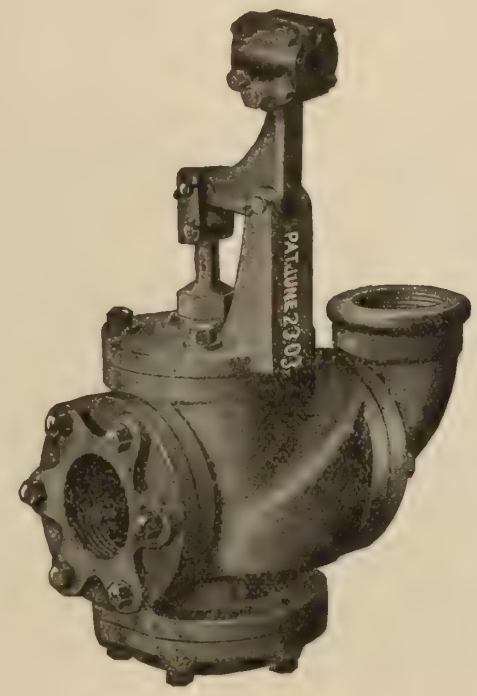
SAW MILL MACHINERY



THE ALLIS DOUBLE CUTTING TELESCOPIC BAND SAW MILL is an entirely new departure. The mill is raised and lowered by a steam and oil ho st as easily as the guide is raised and lowered on the ordinary mill. The saw above the cut can be kept rigid and as short as possible at all times, and the surplus length of blade can be kept below the log instead of on top as with the ordinary mill. The Telescope Band Mill renders practicable the use of a double cutting saw. (See Bulletin 1700.)



If you want a Valve that **does not kick** get the new **ALLIS VERTICAL** for steam feeds. The vertical position of the valves allows of perfect drainage into the exhaust port at the bottom. It is easy working without leaking steam. With ordinary valves steam leakage is the cause of great loss of power.
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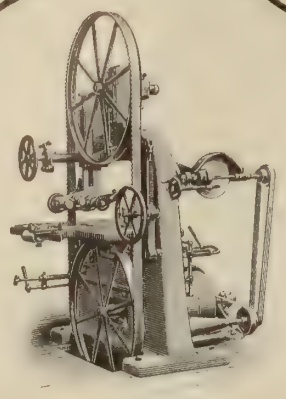

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Handles of Every Kind, Insulated Pins, Spools, Bobbins, Oval Wood Dishes, and General Wood-Work.

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THE DEFIANCE MACHINE WORKS,

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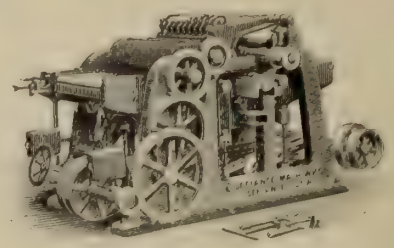

26" DOUBLE SURFACE PLANER

The "Alligator" Steam Warping Tug

SIDE WHEELS OR TWIN SCREWS

The Twin Screws are arranged with flexible joint to raise up in crossing portage

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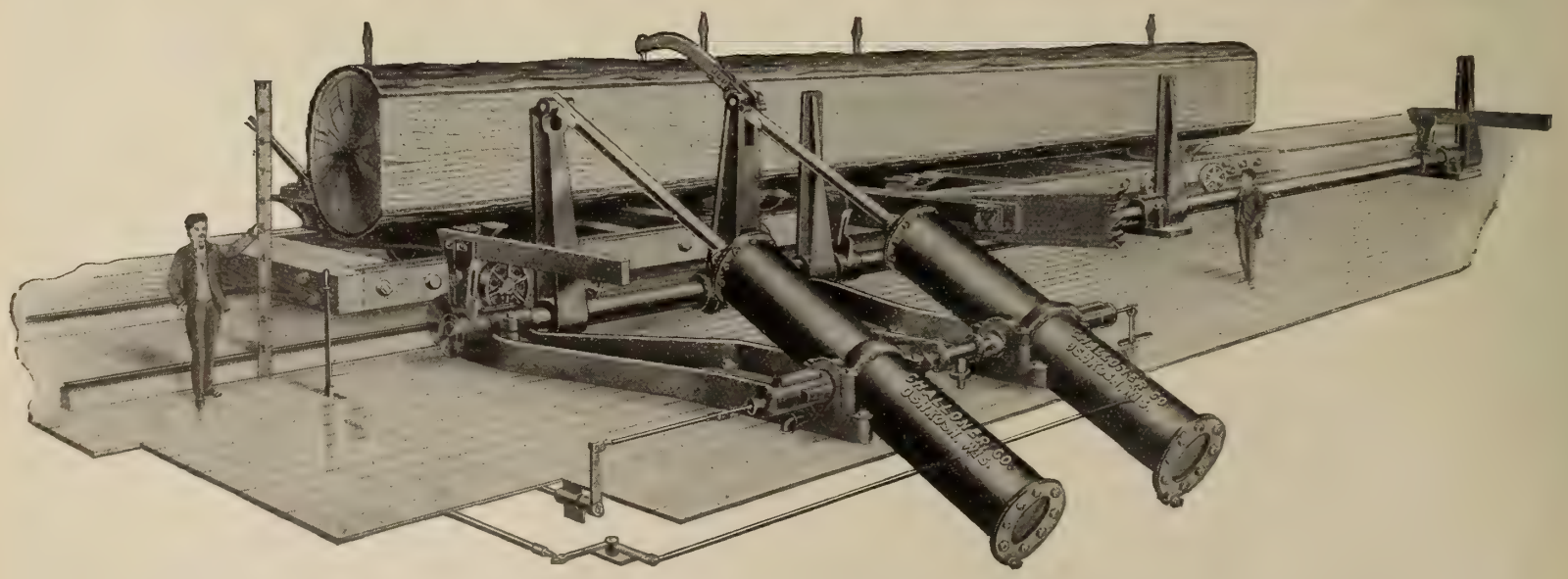
Cables carried in stock for renewals

THE SIMONSON LOG TURNER



This is the only Log Turner that uses no tooth bar and turns the log away from the carriage.
The log is turned on the log deck, thus relieving the carriage of all strain and jar.
Will handle small logs as quickly as any "nigger" and logs scaling 500 feet and over much quicker. Will handle larger logs than is possible with a "nigger."
Don't buy a Log Turner of any kind till you investigate the Simonson.

CHALLONER COMPANY - OSHKOSH, WIS.

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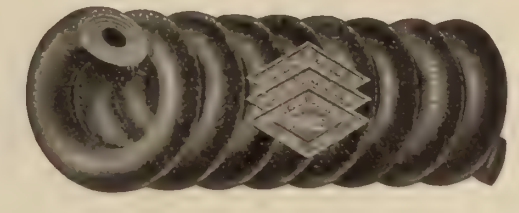

"Cobb's" Packing is especially adapted to withstand heat and highest pressure. The rubber core is oil and heat-proof and will not harden, but remain elastic indefinitely. The outside covering is made of material that is not affected by heat. The lubricant employed is the result of much scientific research and is absolutely free from grit or acids.

We make everything in rubber requisite for an engine room. The following are some of our specialties:

VULCAN SPIRAL PACKING, MAGIC EXPANSION SPIRAL PACKING, AMAZON HYDRAULIC SPIRAL PACKING, INDESTRUCTIBLE (WHITE), KARBONITE (BLACK) RUBY (RED), AND SALAMANDA SHEET PACKINGS, RUBY SECTIONAL GASKETS, GAUGE GLASS RINGS, DISCS, BIBB WASHERS, PUMP VALVES DIAPHRAGMS, PACKING RINGS, RUBBER BELTS, &C.

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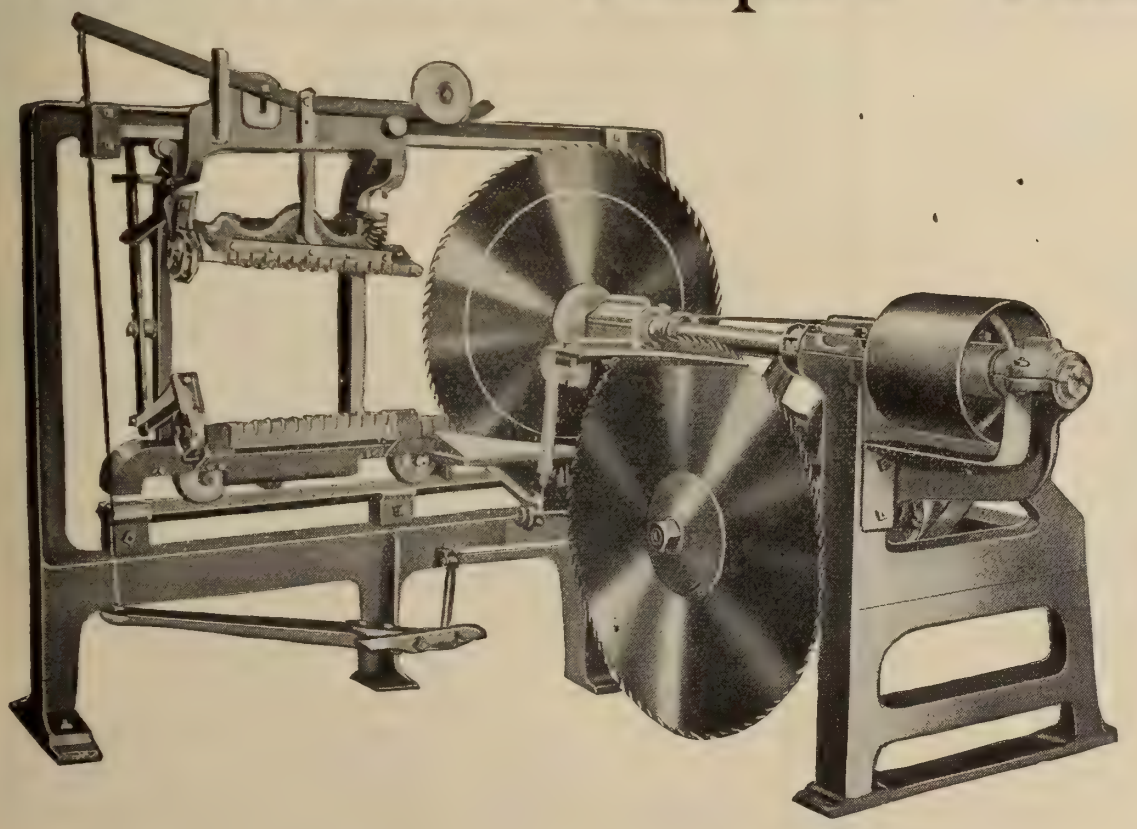
CANADIAN AGENTS: **THE ECONOMICAL MANUFACTURING & SUPPLY CO., Limited**
173 Queen Street East, TORONTO, CANADA

Iron Frame "Simplex" Shingle Machine



IN this, our latest design of Shingle Machine, we have incorporated all the advantages contained in our wood frame "Simplex" and added several improvements.

The arbor has been made heavier and a third bearing added to support it outside the driving pulley. The method of putting lead in the saw arbor has been greatly improved. This is now done by swinging on a centre directly under the saw the whole frame which carries the arbor. Thus the alignment of the bearings is not in any way affected and there will be no danger of hot bearings after the lead has been changed. The change may be made while the machine is running and without stopping the carriage.

An improvement has also been made in the method of driving the edger. It is belted direct from a shaft running at right angles to the main arbor from which it is driven by means of a bevel friction. This makes a very neat, compact drive and has proved satisfactory in the mill.

The rail on which the carriage travels is made of square steel and when worn can be renewed by simply turning upside down.

Over three hundred of our Upright Machines (wood and iron frames) are in use in British Columbia and Washington.

MANUFACTURED ONLY BY

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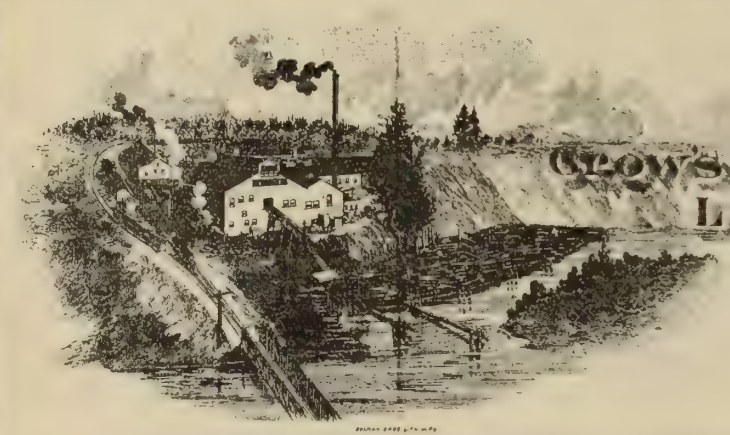

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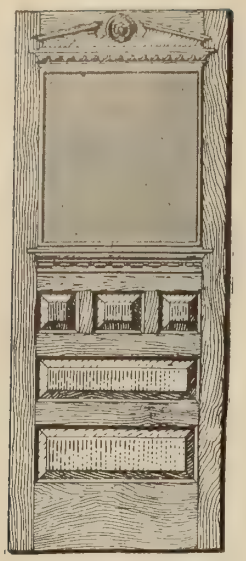

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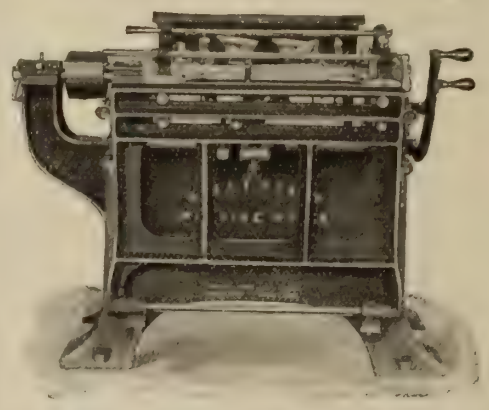

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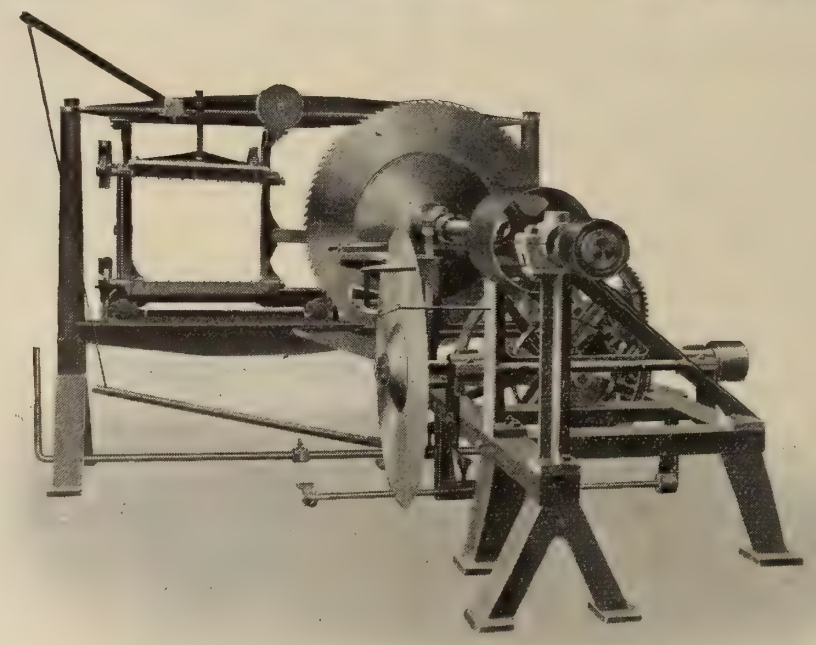

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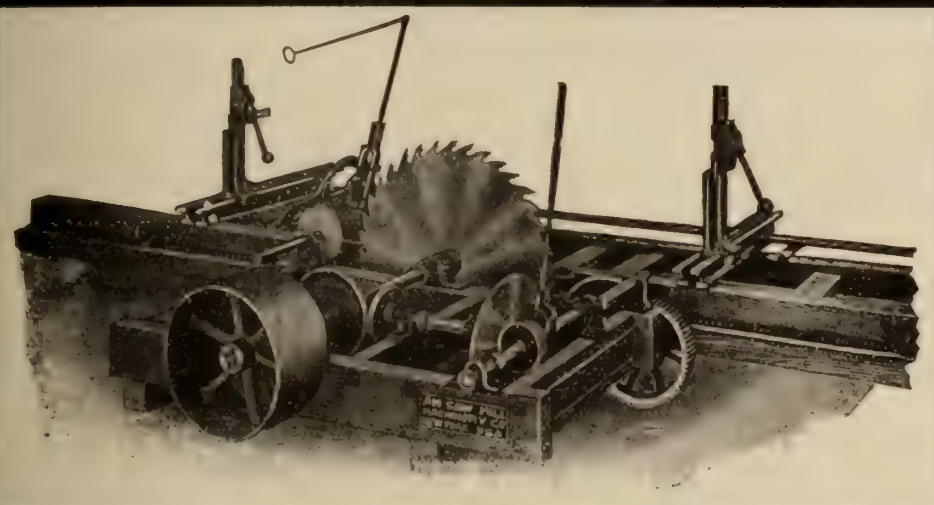

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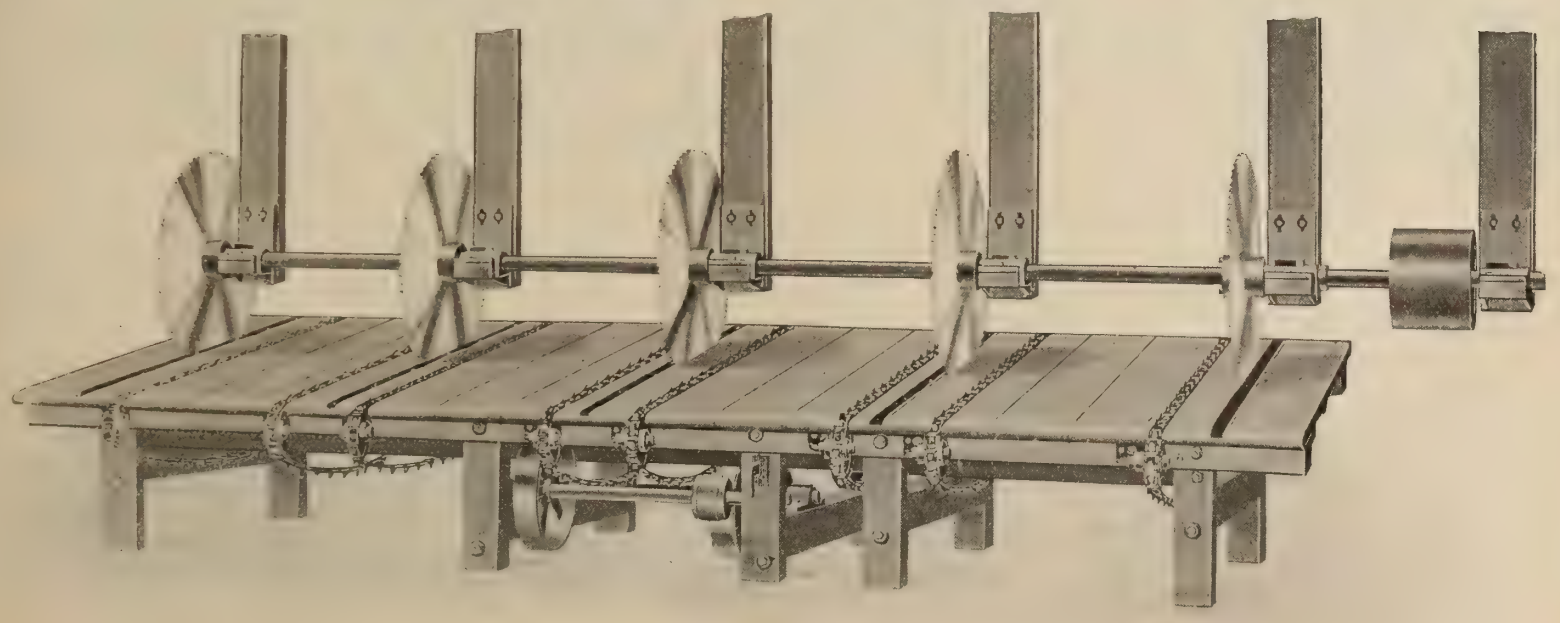

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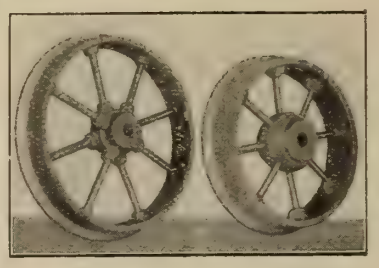

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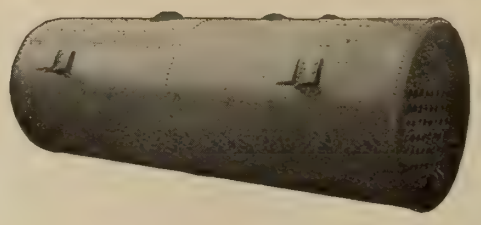

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CANADA LUMBERMAN
AND WOOD-WORKER

VOLUME XXVIII. NUMBER 7. | TORONTO, MONTREAL — JULY, 1907 — WINNIPEG, VANCOUVER | TERMS, $1.00 PER YEAR Single Copies, 10 Cents

Annual Meeting of the Lumbermen's Association of Western Nova Scotia

The Lumbermen's Association of Western Nova Scotia held their fourth annual meeting at Yarmouth on May 30th and 31st. The membership of the Association is as follows: F. C. Whitman, Annapolis; A. D. Mills & Sons, Annapolis; Dickie & McGrath Lumber Company, Tusket; Parker, Eakins & Company, Yarmouth; D. R. Saunders, Lake Annis; Blackadar & Company, Hectanooga; Campbell Lumber Company, Weymouth; John H. Lowe & Son, Aylesford; S. P. Benjamin & Company, Wolfville; Davidson Lumber Company, Bridgewater; Frank Davison, Bridgewater; R. Dawson & Sons, Bridgewater; Ed. Zwicker & Son, New Germany; Alfred Dickie Lumber Company, Stewiacke; Nathan B. Bainot, Riverdale; J. F. McLaren, Liverpool; Mulhull & Hunt, Liverpool; L. H. Minard, Milton; A. E. McMahon, Clark Bros., Bear River; and E. Stehelin, Weymouth.

In addition to the members of the Association, there were in attendance as invited guests, Lieut.-Governer. Fraser, Hon. W. T. Pipes, Attorney-General, Hon. O. T. Daniels, M.P.P., of Annapolis; E. H. Armstrong, M. P. P., Yarmouth; Dr. G. E. DeWitt, Wolfville; B. H. Dodge, M.P.P., Kentville; R. H. Campbell, Superintendent of Forestry, Ottawa.

The following chief fire rangers of Nova Scotia were invited as guests of the Lumbermen's Association:

CHIEF FIRE RANGERS OF NOVA SCOTIA.

J. B. Whitman, Annapolis Royal, appointed May 9th, 1904, for Annapolis district.

John M. Durkee, Pleasant Valley, appointed May 9th, 1904, for Yarmouth and Argyle district.

Jacob F. Penny, New Germany, appointed May 9th, 1904, for Lunenburg district.

James Geddry, Bear Cove, appointed May 9th, 1904, for Clare district.

Bertram Bower, Lower Ohio, appointed May 9th, 1904, for Shelburne and Barrington district.

Frank Goodwin, Weymouth Bridge, appointed May 12th, 1904, for Digby district.

Patrick Boyle, West Caledonia, appointed May 17th, 1904, for Queen's district.

Duncan B. Cruikshank, Welsford, River John, appointed May 25th, 1904, for Pictou district.

Edward H. McGregor, Lower Stewiacke, appointed June 3rd, 1904, for Colchester district.

E. Byron Atkinson, Amherst, appointed June 3rd, 1904, for Cumberland district.

Burchill Fulmer, Shubenacadie, appointed June 27th, 1906, for East Hants district.

R. W. Patterson, South Alton, appointed April 10th, 1906, for King's district.

Gordon Farnell, Upper Musquodoboit, appointed May 31st, 1906, for Halifax district.

ANNUAL CONVENTION OF THE LUMBERMEN'S ASSOCIATION OF WESTERN NOVA SCOTIA. PHOTOGRAPH TAKEN AT TUSKET.

The meeting was called to order at 10.15, President Whitman in the chair. E. K. Spinney, Esq., president of the Yarmouth Board of Trade, on behalf of the Board, extended a welcome to the members of the Lumbermen's Association and the distinguished gentlemen who accompanied them to Yarmouth.

The chairman then called on Lieut.-Governor Fraser, "the home Governor of the people and for the people." Governor Fraser arose, and, after a few happy remarks, thanking the Board of Trade for their welcome, and expressing his pleasure at being present, addressed the audience with regard to the forests of Nova Scotia. He pointed out that our forests should be carefully guarded, not only

because they are a source of wealth to the community, but also because of their beauty. While trees are being hewn down and destroyed, the forests are continually increasing, making good the decay. There is a duty on all men to protect our forests, and every man is or ought to be deeply interested, not only in conserving and preserving the forest, but in increasing it. Every increase is an increase in the value of the property. Many farmers permit their lands to be destitute of trees, greatly decreasing the value of the property. It would pay them to have many more trees. Every man should be a co-worker with Nature to increase the beauty and the value of the forest. Young trees should be carefully preserved and permitted to mature; the man who destroys a promising tree because he himself may not live to see its greater value, is not in accordance with the sentiment of his time. Many young trees are burned for firewood or otherwise destroyed which, if allowed to grow, would become a valuable asset and possess material worth for a more useful purpose. Governor Fraser impressed upon his hearers the importance of observing the forest laws, of guarding and protecting forests and trees, both for their beauty and for their usefulness; his remarks were eloquently delivered.

The next speaker was Hon. W. T. Pipes, Attorney-General, who spoke on "Nova Scotia Laws for the Protection of Woods Against Fire." Mr. Pipes pointed out the laws regarding this subject and cited Dominion and Provincial statutes prohibiting setting fires to forests or property. It is the duty of the whole community to protect the forests from fire; and persons who by negligence, or in violation of law, set fire to forests, are liable to severe penalties. Mr. Pipes impressed the necessity of educating the people to observe the laws relating to this subject. Fire notices should be posted, and our law-abiding people will observe the law if their attention is called to its provisions. Every assistance will be gladly given by the Government.

Mr. R. H. Campbell, Superintendent of Forestry, Ottawa, then read the following interesting paper:

Canadian Forests and the Preservation of the Water Supply.

By R. H. CAMPBELL,
Dominion Superintendent of Forestry, Ottawa.

Canada's forests present a subject as extensive as Canada itself. From the Atlantic to the Pacific they stretch, broken naturally only by the prairies of the west and the barren lands of the north, but showing the ravages by axe and fire of a hostile civilization wherever the foot of man has trod. The forest has been a good friend to Canada, and though the first settlers found its friendly embrace too close and oppressive, we have made ourselves room where we may stand off and see what this gift of nature may mean.

Commencing where the Pacific Ocean washes the shores of the great Province of British Columbia, we have the forests of lofty Douglas fir and cedar, mingled with western spruce and hemlock, running regularly twenty to fifty thousand feet to the acre and reaching as high as 500,000 feet. Following eastward into the mountains we have white pine, balsam fir, yellow pine, tamarack, all western species, with fir and spruce intermingled, but the trees are not so lofty nor the yield per acre specially large. To the north stretches away a forest of spruce of wide but indeterminate extent. The whole forest area of the province has been estimated at 182,000,000 acres or 285,000 square miles.

Then comes the middle west, the so-called Prairie Provinces, which according to an estimate made by Mr. E. Stewart, formerly Dominion Superintendent of Forestry, after making all deductions that could be suggested, total an area of 281,240 square miles. This is a forest of white and black spruce, the former reaching as much as three feet in diameter, with some tamarack and banksian pine, intermingled with balsam and aspen poplar. In the Mackenzie Basin the balsam poplar reaches a diameter of seven feet. Mr. Stewart, however, in making his calculation of the quantity of timber, takes the low figure of 2,000 feet to the acre.

In Ontario and Quebec are the forests of white pine and spruce, covering an area of about 40,000,000 acres, or 62,500 square miles in the former, and possibly 120,000,000 acres, or 187,500 square miles, in the latter. With these are found yellow birch, maple and red oak, which are of commercial value. The hardwoods, such as walnut, white oak and white ash of the southern districts, are no longer a commercial factor of any prominence, being now mainly imported from the United States.

New Brunswick has been a timber producing province from its earliest history, and still holds a prominent position. Its forest area has been calculated at 7,500,000 acres, or 11,720 square miles. Spruce is the mainstay of the lumber industry in New Brunswick, though pine, hemlock, balsam and other woods are found.

For Nova Scotia the area of forest may be stated at 5,000,000 acres, or 7,812 square miles, though probably less than that is actually forested land and possibly more would be suited to forest production. I need not attempt to tell the composition and condition of this forest, which you know much better than I do. Spruce seems, however, to be your chief timber tree.

Canada has a total forest area which may be estimated in round figures at 500,000,000 acres, though it has been placed as high as 800,000,000 acres. If we were to take the timber on this area at 3,000 feet to the acre, which is a low average, we would have a total of fifteen hundred billion feet, a number too large to grasp, but indicating the magnitude of the forest wealth of the Dominion. If the annual product on this area were placed at 100 feet per acre the result would be fifty billion feet, and if the Governments collected dues on this product at $1 per thousand feet it would be fifty million dollars. Besides this would be the development of wealth and business and the oportunities for employment of the people.

Such figures as to our forest area explain why it is that European foresters, whether in Great Britain or on the continent, when considering the future timber supply of the world, always give Canada a prominent place as one of the greatest factors in providing for the world's needs. Coniferous timber is most largely used, and Russia (including Finland), Sweden and Canada are the only three countries remaining that are counted on to increase their output in the face of decreasing supplies in other countries with increasing demands.

But while these figures are interesting and give a larger view of the importance and extent of the forests, they are mere approximations, and we are far from reaching a proper view of the subject if we do not consider the forests more closely. And if we do we find conditions far from satisfactory. Fire has done its destructive work everywhere. Cutting has been done without regard to the future. And thus, while the forest areas are lands unsuited for any other purpose than forest growth, the problem of dealing with them has, in addition to its magnitude, a further difficulty created by the mistakes and the lack of foresight, to a large extent necessary and excusable, of the past.

The forests of the Dominion are situated on the rocky elevations, such as the Laurentian ridge and the Rocky and Selkirk Mountains, lands unfitted for agriculture, and not only producing timber but forming the great watersheds of the country which they dominate and control. The forests are to be considered, therefore, from two aspects, first as a national resource, and second as a factor influencing the water supply of the country and the industries dependent thereon.

Taking the latter consideration first into view, no person in these days of the development of electrical power but can appreciate the great part that the water powers are playing and the still greater part they will play in the future. Quoting the statement of Mr. Cecil B. Smith at the Forestry Convention held in Ottawa: "At the present time there has been developed in Canada about 350,000 horse-power of water power, which probably, including transmission lines, represents an investment of $25,000,000 to $30,000,000, and considered on a ten hour basis means a saving of at least five tons of coal per horse-power year, or 1,750,000 tons of coal per year as compared with about 6,000,000 annually imported. Now the near future will easily see this amount doubled or trebled if intelligent and comprehensive plans are adopted for development and distribution, and not only can a large amount of money be kept in our country, but industries and public utilities will be benefited by being supplied with electricity at moderate rates."

What influence have the forests on the water supply? It was at one time held as an axiom unquestioned that forests increased the rainfall, but in these latter days higher critics have arisen who have questioned this popular belief. Experiments have been carried on in Europe and to some extent in the United States. Results in France support the old belief, those in Germany point both ways and leave the matter uncertain. Some recent experiments in Austria show that the forest has an influence but not a large one. Mr. Gifford Pinchot, Forester for the United States, has placed the influence at about ten per cent. While the experiments are still inconclusive, it seems certain that the forest has some influence in increasing the rainfall, owing probably to the cooler atmosphere which it induces.

The mechanical effect of the forest in retarding the flow of water and allowing it to reach the streams slowly is unquestionable. It needs no demonstration but common observation to show that a cleared slope will allow water to run off more quickly than one which has all the mehcanical obstructions existing in a forest, both in the trees themselves and in the humus of the forest floor.

The climate in all parts of Canada, with the exception of Southern Alberta and Saskatchewan, is a fairly humid one, and the water supply does not press itself acutely on the attention, but there is everywhere noticeable as the country is being cleared an increasing irregularity of flow in the streams which is detrimental both to agriculture and industrial development.

The clearing of the forests will unfavorably affect the water supply, and this forms a strong argument for their preservation. And there is the further fact, which need not be enlarged upon, of the beneficial effect of the forest in furnishing protection from bleak winds and modifying extremes of temperature. Considering the question from these points of view only, the matter of dealing with the forest would be a simple one, for neither the kind nor the quality of the timber would matter. Preservation would be all that need be considered.

It is when the forest is considered as a national resource or from the economic standpoint that the question becomes complicated. There is not only protection, there is reproduction to be provided for, and reproduction of the best species and in the largest quantity.

The basis of all forest management must be protection against fire. Fire is the enemy. If this step is not taken no other need be. Fortunately, in Canada both the governments and the lumbermen have appreciated this necessity and made some provision for it, late though it may have been. All the pro-

vinces have fire Acts, and Nova Scotia has one of the best. The Dominion and all the provinces, with the exception of British Columbia, have provided for the appointment of fire rangers. I understand that this system is working well in Nova Scotia, and it is unnecessary to enlarge upon it. Where good men are appointed the results are satisfactory. In most cases, however, the service is on too small a scale for the territory to be covered, and men are expected to do what are simply impossibilities.

In the sphere of governmental action the establishment of forest reserves is a commendable policy, and one which has been largely adopted. The forest reserve lays down in regard to a defined tract of land the principle that this is forest land and is to remain such permanently. It advertises to the public that the forest has a place and remains as a factor in modern civilization. It localizes the problem, which the extent of the forests of Canada makes overwhelming. It furnishes a field for experiment and investigation of plans and problems of forest management. By the Dominion Forest Reserves Act of last year forest reserves aggregating an area of 5,400 square miles were set apart, covering some of the dominating watersheds of the west. We are having a regular timber survey made of these reserves, to ascertain the kind and quality of the stand and its condition in general, and as this work is completed we propose to lay out regular plans of cutting and utilizing the timber so that we may perpetuate and improve the stand. These results will be useful in themselves as well as examples of what may be done.

In regard to timber, either inside or outside of forest reserves, which is held by lumbermen, the state has a relation, no matter whether the title under which it is held be by license or in fee simple. There must be private ownership or operation in forests. The state simply cannot handle their vast areas as a public service. What the state should do is to so adjust the incidence of rents and taxation that encouragement should be given to the improvement of the forest rather than to its destruction. Forest taxation is a science in itself which requires much more study than has yet been given it in Canada, and particularly by those who are responsible for the incidence of taxation.

The Government should, so far as it has jurisdiction, exercise its power to regualte the cutting, and if it adjusts taxation to the end of preserving the forest it might fairly claim a right to regulate.

Will forestry pay the lumbermen? That depends on what forestry means. If it means the intensive systems of Europe it cannot be adopted in Canada to-day. But forestry is merely the exploitation of the forest having regard to its perpetuation and reproduction. And how much longer can we go on without that?

In dealing with the matter it is desirable first to decide what species is to be favored. In Nova Scotia spruce would probably be most generally chosen. What can be done to assist spruce reproduction? I take it that natural regeneration is to be the method, and we are fortunate in Canada, and you especially in Nova Scotia, that the spruce reproduces easily. This can be provided for by leaving seed trees when cutting where the ground is not already stocked with a young growth. If the trees are on an exposed ridge all should be taken or all left, as the spruce is a shallow-rooted tree, easily overthrown by the wind, especially when suddenly isolated. Well meant efforts to provide for reproduction in this way have resulted in disaster, owing to the wind having been left out of consideration.

In conducting operations, the young growth should be protected from destruction as far as possible. It will be difficult to do so completely, but even in the ordinary work of lumbering, care on the part of those doing the work and an interest by them in the matter will result in the saving of a large proportion. And every tree, no matter how small, is worth saving, for it is at one of the stages through which every tree, no matter how valuable finally, must pass, and its potential value is great even if its actual value is small.

There is a danger also of full-grown, dominant species, especially hardwoods, retarding and suppressing the young growth. It is therefore desirable that any such trees should be removed in the lumbering operations if it can be done profitably. And, even if it did not furnish a profit, it might be worth while for the sake of the young spruce, for the years of suppression mean so much actual loss in growth. There is a great advantage about the spruce here that even after long years of suppression it will, when exposed to the light, shoot up and grow vigorously.

The debris left after lumbering operations is often a serious danger in case of fire. Experiments were made in white pine forests in Minnesota to get rid of this slash by burning. The cost was not more than 25 cents per thousand, and the experiment was considered a success, as it also improved the reproduction. With the tops being cut down small, however, nothing of this kind may be necessary, and the pulp mills have brought the portion of the tree which can be utilized to a small diameter. The pulp mill has caused great destruction in the forest, but it and every other method of further utilizing forest products may be a great assistance to improving operations in the forest.

The following, generally of a diameter limit, say of twelve inches, will assist in preserving the forest while at the same time giving a product of greater value:

Circumstances may arise where the land has been burnt over repeatedly or where for some other reason there are no seed trees of the desirable species. Places like these may be reforested by seeding or by planting. Broadcast seeding of red spruce in the Adirondacks has succeeded well on burnt-over land covered by poplar. As a rule it is likely to result in a great waste of seed. The seed spot method is a surer way of bringing about a good percentage of germination and a regular stand. It consists in stirring up the earth at regular intervals and dropping the seed on these spots. Spruce seed is quoted at $3.75 to $4 per pound, but the New York Forest Commission gathered it for their own purposes at about 70 cents per pound.

Planting with nursery stock on burnt-over lands in the Adirondacks similar to a great deal of what we have in Canada was done at one-half a cent per tree. Planting six feet by six would require 1,200 trees, or $6 per acre; planting four feet by four would require 2,700 trees, or $13.50 per acre. This means that planting is hardly likely to be undertaken by lumbermen on a large scale at present.

What is required is a more careful and exact study of the forest, its conditions of growth and its actual condition. Every piece of forest land presents its own problems, and must be examined in particular. One gentleman operating in Nova Scotia has made the statement that the lumbermen of Canada do not really know their own timber lands or how they are operated. They confine their attention to the milling and office end of the business. Whether this be true or not, it is only a business principle that careful and economical management should be adopted throughout all stages of a business, and a destructive waste in the forest is just as much a loss as if it occurred at the mill or in the manufactured product.

Scientific and practical knowledge and business ability must join hand in hand if we are to get the best returns from our forests. It is this junction of forces which has placed our agriculture in the successful place which it holds to-day. The forester and lumberman must work together, keeping the aims of both in view, and I have full confidence that the genius of the Canadian people will work out a forestry system of its own, suited to its own peculiar needs and circumstances, and which will eventuate in making the forest a permanent and fruitful resource of the nation, a source of happy and healthful employment to our people, and a monument to the ability of the men of this country to administer the natural resources that have been placed in their charge.

The following address was delivered by Dr. G. E. DeWitt, president of the Nova Scotia Forestry Association:

A Plea for Forest Protection and Perpetuation.

By Dr. G. E. De Witt,
President Nova Scotia Forestry Association.

Mr. President and Gentlemen: While attempting to comply with the request to give an address upon the subject of forestry at this convention, I do not do so from the viewpoint of teaching forestry, or the best methods of lumbering from a business standpoint, or the way to make the most money from the product, but to make a plea before this influential convention for the prompt recognition of forest protection and perpetuation.

Nor am I here to inculcate the thought that the lumbermen are, generally speaking, the reckless destroyers of the forest they have often been considered, but are merely doing what the nature of their business compels them to do, and I presume they will continue doing, until the conditions have changed either by the action of economic laws, or perhaps governmental action.

I am also aware of the fact that the lumberman who would cut his timber with a view towards forest reproduction, while his competitors, or other lumbermen who do not care for the permanency of their industry, but whose sole aim is to shape their cutting so as to get the most out of it in as short a time as possible, is not in harmony with the principles which govern and control competition. I do wish to say, however, that unless some method of protection of the forests be adopted other than that which has prevailed in the province for the past hundred years, that in the next hundred years the telescopes from other planets will see this little corner of our planet, called Nova Scotia, as barren and desolate as the moon. The statement has been made in the Legislature of the province that much of the denuded land in the country is barren and would scarcely "nourish a rabbit." We are painfully aware that some of the fire devasted areas show a rocky soil, and in many places the soil seems to be entirely destroyed. Now, Mr. President and gentlemen, I venture to say there is one kind of vegetation that will grow upon a rock, and that is the forest tree. Have we not seen the bare rock or perhaps partially moss covered, supporting the spruce, its roots running far and wide along the ledge, diving into every crevice, taking up the moisture and developing a good sized tree? I do not mention this fact which I, as well as many present must have observed, for the purpose of advocating reforestation upon barren rocks and ledges, but there are thousands of acres of denuded land in this province where it is not all ledge or rock, but with soil enough, though shallow, to propagate forest seed and develop forest growth.

As the forest grows and sheds its leaves, it contributes humus to the sparse soil, preserves moisture and year by year adds to the forest floor.

Dr. Henry Augustine, writing in the North British Agriculturist, said that soil determined the species to be grown and that was about all. Forests, he continued, grew where there was no soil at all. He knew of paying forests where there was nothing but bare solid rock. He alluded to object lessons in Great Britain, where forests flourished upon ground composed literally of rocks.

The assertion that the forest will propagate and perpetuate itself in this country without artificial aid, or the exercise of greater vigilance than has hitherto prevailed, is, I venture to say, untenable.

It is not my purpose to lay down any hard and fast rule before the gentlemen of this convention as to how their holdings shall be perpetuated, but to make a plea for a system of silviculture or forestry protection that will assure a more careful and economic use of the forests than has hitherto obtained.

Were I to give an address upon the effect of forest on water flow, the sterility of the soil caused by deforestation, or the effect of forest upon temperature and climate, I would only be repeating what you all know or can obtain from the many excellent published works on forestry, particularly that valuable work written by Dr. B. E. Fernow, late of Cornell University, entitled "Economics of Forestry."

I may be pardoned, however, in alluding to the preservation and perpetuation of the forest from a sanitary standpoint.

When we know that the forest is the main source of the water supply; that the forest preserves and stores up water by creating a forest floor, which holds in check the water, preventing rushing torrents in the time of melting snows and heavy rains, causing a constant and steady percolation, the intertwining roots carrying the water into the ground, storing it into springs in its purity, making this indispensable sustainer of life available for man's purposes and needs, one must admit and acknowledge the necessity of preserving the forest.

FOREST AIR FREE FROM DISEASE GERMS.

It has been found that forest air is comparatively free from pathogenic or disease microbes; in fact, it is stated by forestry experts that in dense forests, where the variation of soil moisture is small and decomposing humus keeps the soil acid, no disease germs have been found. Is it any wonder that the sportsman, or lover of the woods longs to get away to the forest shelter to recuperate his bodily energies, knowing that he can breathe the pure forest air without danger of inhaling the germs of disease?

Furthermore, the water supply for domestic purposes, having its source in the forest, is a guarantee of immunity from disease to those who are favored with it. Bringing the question nearer home or in touch with our own experience, we have found that the domestic water supply gotten from the hills has had much to do with lessening disease.

Since water has been brought into the towns in the Annapolis valley from Digby to Windsor, the disease known as typhoid fever has been reduced in the towns from 75 to 90 per cent. Typhoid is known as a water disease, or, in other words, the germs of this disease are carried and preserved by a contaminated water supply. The act of bringing water into localities from the source of the least contamination is the practice of preventive medicine.

I remember with sadness of many pathetic and sympathetic funeral sermons preached in the Annapolis valley in the days of my youth because, perchance, the head of the family or some of its members had been suddenly stricken with typhoid, and the cause of these premature deaths was a polluted water supply. A sink drain perhaps too near a well, or a wet and undrained soil contributing its polluted surface water to the well. We look back at the lack or want of a pure water supply in the towns and villages of this province fifty years ago, when the people believed that the dire consequences, which in so many instances were disease and death, was the will of God, a visitation of Providence, a calamity unavoidable, but thanks to a better understanding of the laws of health that govern the human body, ideas are changing; disease is not so much regarded now as a manifestation of divine pleasure or displeasure, although a few primitive minds still adhere to it, yet the rank and file refuse to accept or acknowledge this supernatural agency. The practical and most advanced students of the day place it where it belongs, to the failure to observe the laws of health, and one of the most important agencies governing the laws of health is a pure water supply. And a pure and unadulterated water supply can only come from a storage caused by the influences of the forest.

It has been demonstrated that many diseases to which flesh is heir are traced to drinking water. It then becomes essential that the water we drink carry as little soil particles as possible, and we can only have a guarantee of freedom from soil contamination by obtaining water from a well-forested region where no disease germs have their abode.

The hills on either side of the region of country in this province, from Annapolis Royal to Windsor, have largely become denuded of their forest. This deforestation has, I believe, a damaging effect upon climate and agriculture, and if allowed to go on as heretofore without any artificial aid to reproduce and perpetuate forest growth, it will be of incalulable injury to the climate, agriculture and the water supply. Hitherto when discussing forestry conditions at forestry meetings, I have ventured to say that the denudation of the hills and slopes skirting the Annapolis valley, the home of the apple industry of the province, has injuriously affected the industry of the valley.

The fogs of the Bay of Fundy find easier access into the valley because of the deforestation of the land surrounding the valley, and perforce contributes to the black spot or damaging fungus which at the present time is threatening this valuable industry, and more difficult to control than any other evil that has hitherto assailed it. The chief insect pests which have become so prevalent in the orchards for the past twenty years, which are the kanker worm, caterpillar and coddling moth, have done the most damage in orchards farthest removed from the forest. The insect-killing birds which were a familiar sight in the orchards are becoming rare. They were the cuckoo, the singing birds, the thrush and woodpeckers, all of which are insect devourers, and which are scarcely seen in the orchards at the present time that are farthest removed from the forest shelter.

The Fish and Game Protective Association of this province have recently asked the Legislature to grant a greater protection to the game and fish than has hitherto been done. While this is laudable and necessary to the protection of the game and fish, in forest and stream, an equally and more urgent need at the present hour is the preservation and perpetuation of the forest which contains the game and influences the water supply, which latter contains the fish. Where areas of forest are devasted or laid bare, by axe or fire, the water supply is correspondingly reduced, and because of the check which the forest floor gives to the water in the rainy seasons, freshets become prevalent, causing erosion of the soil, carrying silt into the rivers and brooks, materially interfering with the sportsman's craft.

Not this alone, but owing to the storage power of the forest soil being to a great extent lost, when the dry season prevails, the rivers and streams become low, rendering them less attractive and suitable for the abode of the fish, which have yearly found their way from the sea for the purpose of depositing their spawn, and when these conditions are too often or too long repeated the fish desert them and find more suitable habitations. I am aware, Mr. President and gentlemen, that the proposition to the Government and perhaps to the majority of the people in this province to give and seek for Governmental aid for silvicultural purposes, that our forests may be protected and perpetuated, is looked upon as an innovation and perhaps as the murmurings of cranks, but I am also aware that the promulgation of a new gospel, or new truth, which has materially to do with the welfare of a nation, has at first in the history of most countries been strenuously opposed, but ultimately, perhaps after a great loss of money and even of life, has been universally adopted. To mention some of these is not my purpose, or within the limits of my time.

Having attended the Forestry Congress at Ottawa in January, 1906, and there listened to some of the most distinguished forestry experts of the United States, where silviculture has been and is being adopted in connection with forestry colleges and elsewhere, among whom was Dr. B. E. Fernow, a forester who had received his training in the woods and schools of Germany, who, in 1886, under the ausipces of the Federal Government was placed at the head of the Forestry Division of the Agricultural Department, and who by his efforts in lecturing and writing sought to spread among the people correct information on forestry subjects, gave to that Department an impetus it did not forget, and who later became the leader and teacher of the Forestry School at Cornell; Dr. Pinchot, another gentleman of European training and who succeeded Dr. Fernow in the Agricultural Department at Washington, and possessed of a large and practical experience in forestry matters in this continent, contributed largely to the interest and success of the convention; Dr. C. A. Schneck, of German training also, was among those who gave valuable information in forestry during the congress. And in addition to the forestry men from over the border there were Canadians whose contributions to the congress on forestry conditions evinced an interest and knowledeg of the subject equal to any who contributed to the convention. And, sir, having received impressions from these men at the convention, which impelled me to become more familiar with the forestry conditions that exist in this country, and which if allowed to go on without protest will be of incalculable injury to our land, is my excuse for advocating that even the local Government should awake and lend financial aid to the betterment of forestry conditions in Nova Scotia. So great is the demand, so vast are the requirements of the trades dependent upon the forests, that unless certain economic conditions are observed and enforced there is danger of a rapid deterioration and destruction of the forests in this country.

A government may have an interest in forests in two different ways—it may be the owner of forests or it may find that the general welfare of the country is seriously affected by the manner in which the forests are managed, and therefore desire to regulate such so as to bring about more favorable conditions. The latter seems the only plan open for the Government of this province to follow, as the forest land is about all in the hands of private owners who are engaged in lumbering operations, or holding them for the highest market. In view of the fact that the lumbermen's business is not to perpetuate the forest by adopting a system of silviculture, but by making all out of his holdings in the shortest time possible; in view of the fact that the land speculator's sole interest is to hold his forest lands for the highest bidder, it certainly would be opportune for the Government to see to it that for no other than climatic, physiographic and soil fertility conditions that such steps be taken as will prevent the wholesale slaughter of the forests by adopting some definite system of reforestation.

The private owners of the forest lands in this country and the Government as well, must recognize, as a recent writer has observed, that the legend which has so long obtained, that the forest is inexhaustible, cannot longer be credited.

There are portions of the globe, as we are all doubtless well aware, which once sustained magnificent forests, that are now transformed into lifeless deserts, as in Western Asia, portions of Eastern and Southern Europe, the productive regions of Algeria and Sicily, of France and Germany and Great Britain. So alarming has been the desolation that the people have and are making strenuous efforts to check the destruction of their forests and perpetuate them by adopting silvicultural methods. They have recognized that one of the most important functions of the forest is to protect the climatic and physiographical interests of the country. In the United States the setting aside of large forest reservations in the mountain regions of the west by the Government has been principally for this purpose.

New York and Pennsylvania also consider their public forests in the first place as a protection to the welfare of their rivers and the fertility of their valleys. And if the people of this province have not yet awakened to the realization of the relative value of the forest to climate, the water flow and soil fertility conditions, the day is coming when they will do so, and I trust when it will not be too late to retrieve and put into practice such measures as will be conducive to these important interests.

The weal and the woe of this country as a resort for tourists, by protecting the game in the forests, the fish in the streams, the water flow as a power to generate electrical and other machinery and protect the fertility of the soil, is largely in the hands of the gentlemen who control the forests of this country. The future destiny of this little province by the sea depends more upon those who control the forests from the Town of Yarmouth to Cape North than upon any other like number of men, whether engaged in agriculture, mining or any other industry.

SECOND DAY.

Among the speakers at the Friday morning session was Mr. E. H. Armstrong, M.P.P., who referred to the Yarmouth County lumber and shipping interests.

Mr. J. B. Whitman, Chief Fire Ranger for Annapolis County, read the following paper on "Forest Growth and Protection":

Forest Growth and Protection.

By J. B WHITMAN,
Chief Fire Ranger, Annapolis County.

The president of the Lumbermen's Association informed me some time ago that he was depending on me for a paper on "Forest Growth and Protection." I will not try to make any excuses for my deficiencies, but will do the best I can. Most of us have work to do, and in a matter like this might do better if more time were at our disposal. However, as the growth and protection of our forests is a matter of vital importance to this province, and is also a question in which we have just began to be interested, I consider that an attempt to treat the subject will be not only a means of enabling me to learn more about it myself, but will place me in a position to more easily discover my own mistakes and shortcomings. The subject itself is one that should interest every Nova Scotian, by reason of its concerning one of the most important industries that we have. Also, this province will produce a large quantity of timber annually, without depleting its source of supply.

Within the last few years, during which period the population at large has begun to interest itself in our forests, we have had more or less discussion about reseeding and reforesting in order that our supply may be maintained. Perhaps we can show that the growth of trees is a very large item in maintaining our supply.

Forest growth for our present purposes may be defined as the increase in diameter which a timber tree makes in one year. This increase in diameter or growth is something that we have always had, but it is only within comparatively recent years that we have begun to realize what it means.

It may vary somewhat in different years, due perhaps to the season, but for all practical purposes it may be considered a constant quantity and as regular as the seasons in their courses. It is a remarkable fact that the forest tree takes from earth and air certain substances and converts them so surely and so quickly into that which is one of the essentials of our present day civilization, wood.

In order that we may form some idea of what the growth of wood means, we will take up my own County of Annapolis.

It is estimated that Annapolis County contains about 600,000 acres, about one-third of which is devoted to agricultural purposes. About 50,000 acres is occupied by lakes, bogs, swamps, etc., although there is practically no waste outside of the bogs. This gives a net balance of 350,000,000 acres as timber land. By a series of careful calculations and close personal observation, we are assured that those 350,000 acres are capable of giving us per year an average of 200 feet each, superficial, thus making a total annual production in that county alone of 70,000,000 feet, and if we are not getting an available increase of 70,000,000 in Annapolis County each year it is not the fault of the growth. And this we can prove from actual measurement. We know that a spruce tree under ordinary conditions will increase in diameter in one year about two-fifths of an inch. If we take an ordinary tree, thirty-two feet long and eight inches at the small end, it will scale, according to Scribner's rule, 86 feet, the butt making 54 feet and the top 32 feet. If we increase the diameter of these two logs by two-fifths of an inch we find by the same rule that we have an increase of a little more than 8 feet superficial, the whole tree making 94 feet, instead of 86. If we use another common rule, viz., square the diameter, multiply by the length and divide by 24, we get for the butt log 66 feet and the top 42, the whole making 108 feet. By this rule, if we increase the diameter two-fifths of an inch, we get from the butt log 70 feet and from the top 46 feet. In both cases there is an increase of 8 feet superficial in the tree. Also if we take a small tree, say two feet high and one inch in diameter at the butt, we find that in one season the solid contents have increased in the ratio of 100 as to 140, that is, there is 40 per cent. more wood than at the beginning of the season. This increase is about the average growth of our trees. Some of it is much more rapid. I have here a sample of spruce which shows an increase in diameter of nearly six inches in eleven years; also a pine showing growth of five and one-quarter inches in nine years. Then, according to our average growth, we can produce a tree two feet in diameter in about sixty years.

All lumbermen know that after taking the mature logs off a piece of land, if they do not cut them too small they can go over the same ground again in about fifteen years and get as good a crop as at first; and also in this connection some lumbermen are realizing the fact that a tree below a certain size can not be cut and marketed at a profit, while it is worth something if left standing.

This growth of timber has been going on in a never ending cycle, all the conditions necessary to produce it being furnished by nature. Man so far has done nothing but cut the trees down and take them away—no planting, no pruning, no cultivation, simply reaping the harvest. This might have gone on for all time but that man, with characteristic carelessless, allowed the fire to come in and destroy a portion of this profitable heritage, and when this began to be a large factor in the destruction of our forests the cry went forth that they were being cut away and soon we would have no timber.

This idea prevailed to a very large extent, but after a while men began to notice that when a tree was left, as being too small for a log, it was only a few years before it would have attained the requisite size, and all that was required was to leave the tree alone and incidentally keep the fire away from it. This brings us to the subject of protection.

There seemed to be only one thing requisite, and that was protection from fire. You all know how the fire law has been working, and I think I am justified in saying it has had a measure of success. As conditions change and as the situation develops, we will probably require some amendments to the present law.

At a meeting of Chief Rangers, held in Halifax in January last, there seemed to be a little friction in some counties between the municipal councils and the carrying out of the working of the law. We can each have our individual opinion about this matter, mine being that the council should have very little to do with it. Some of the councillors are from districts that have no sympathy with the law and are not at all in touch with the situation. The Chief Forest Ranger in each county should have charge of the matter in that county and should not be hampered by the municipal council, and if the Chief Forest Ranger is not making a success of the matter in his county the Government should ask for his resignation at once, as the preservation and protection of our forests is not a matter of sentiment but of good, hard-headed business. I may say that in Annapolis County, so far as I know, there has not been any friction in the carrying out of the fire law with the municipal council, but this apparently has not been the case in all of the counties. Probably there may have to be some changes along this line in the near future. Also at present there seems to be some lack of uniformity in the carrying out of the law by each individual ranger. This may be obviated by a plan which has been agréed upon by the rangers themselves, which is to have a meeting of all the chief rangers in January of each year, to compare notes and suggest changes if desirable. Attendance at such a meeting ought to be compulsory.

These remarks may seem to be departing from the strict letter of my subject, but they assuredly come under the head of protection, as in order to get the best protection possible we want the best law carried out in the best manner. At the present time the protection of our forests is the point to be emphasized; beside it everything else sinks into insignificance. Tree planting and reforesting are something that we may come to by and by, but we have not reached that stage yet. Reseeding of our denuded areas is being attended to very industriously by nature, and in time we may be in a position to assist her, but that time has not yet fully arrived. The only thing of importance that we require to attend to now is to learn pretty fully how to take care of what we have got and what nature is giving to us every season, and after a while we will be ready to take care of the reforesting that we may do ourselves. In a number of places in the barrens I have noticed that it is only a very few years before we begin to see an abundance of young trees attaining considerable size. It is a very common thing to find more than five hundred of them to the acre, and I have counted more than nine hundred to the acre.

When a fire occurs on the barrens, even if it is very early in the spring and not very dry, every small soft wood tree, like spruce and pine, will be destroyed. I have frequently seen places where fire has passed and has not damaged the hardwood sprouts, but has completely killed every vestige of soft wood. If we can only keep the fires down, what we understand by barrens will soon be a thing of the past, we will have no barrens, and this without any reseeding or tree planting on our part. Nature will do it all. When we have done all we can do along this line, then we may begin to talk about tree planting.

If we have a hardwood district, we can remove the hardwood, perhaps at a paying price, and then reseed the district to pine or some other desirable kind. For the present, however, our aim and object should be first, last and all the time to prevent fires. Results show that we can do this to some extent at least.

There is also a chance to prevent waste among lumbermen themselves. Last summer I was in a district where some hemlock trees had been cut and peeled. They were mostly large trees, and where one of them had been cut there were no less than four small spruce destroyed that might have been saved. It was not really necessary to cut or destroy one of the spruce, yet there were four absolutely wasted. They were all nearly of the same size, being about five inches in diameter and straight, smooth trees, which, if nothing had happened, would in about twenty or twenty-five years have made fair sized logs.

Where another large hemlock had been cut, five small spruce trees were destroyed. It seemed necessary to destroy two of them to get the large tree, but the other three should have been saved. And so simply because a good many of our people forget that small trees grow to be large ones, there is a constant waste of good lumber. In a few instances we begin to notice that some men are careful not to unnecessarily destroy the small timber, but to say the least there is a great lack of good management in this direction. From careful personal observation we estimate that, until very recently at least, nearly ten per cent. of the actual cutting operation was wasted, first, by cutting small trees that could have been left; secondly, by leaving a portion of the top; thirdly, by cutting the stumps too high and by using good timber for building camps, making rollways and so forth. This state of affairs should not be, and, while there is some improvement noticeable, yet there is still much to be done.

I don't know that I am expected to say anything about the Game Society, but when it comes to the protection of our forests we quite incidentally rub elbows with them. The Nova Scotia Game Society sells licenses to foreigners to hunt on private property, or, what practically amounts to that, and this same hunting is more or less of a menace to the forests. Every good citizen should be interested in the protection of our game. It is a great privilege to be able to hunt an animal as large as a moose; also some people claim it is great sport to catch trout, and so far as I know there has been no restriction whatever enforced against anyone for catching trout in the open season. Very many trout have been caught by foreigners, and while the catching of them has involved some risk to our forests and has been the means of starting a large number of disastrous forest fires, and while even now year by year it is costing the fire service more or less money to keep tab on some of the fishing parties, nevertheless those same parties contribute not one cent towards forest protection. This does not seem to be just, yet it is a fact.

And now, Mr. President and gentlemen, I thank you heartily for the privilege of making these few statements and for the attention you have given me, and I trust we may all be benefited by this meeting, since no matter how poorly my ideas may have been expressed, the subject itself is a worthy one and is deserving of the best efforts of our best minds, to maintain undiminished this wealth which we have inherited and which we are bound by all laws of economy and good sense to keep and protect, and to preserve to our own use and to the use of those who will succeed us in coming generations.

SOCIAL FEATURES.

On Thursday afternoon there was an excursion to inspect the magnificent saw mills of Dickie & McGrath at Tusket and after returning to Yarmouth, a drive around the city. In the evening a banquet was held at the Grand Hotel, at which 125 lumbermen and guests were present. The banquet was tendered by the Yarmouth Board of Trade, of which Mr. E. K. Spinney is president and Wm. K. Kelly secretary.

An automobile tour was arranged for Friday afternoon, which was greatly enjoyed. A circuit was made of the surrounding country, giving a magnificent view of the Tusket Lakes. Supper was served at 6 p.m. at the Gillman House, where Tusket salmon, caught the same day, was a special dish and admirably served.

Demise of Two Prominent Canadian Lumbermen

THE LATE JOHN WALDIE.

With the death of Mr. John Waldie, who after a brief illness passed away at his home, "Glenhurst," 75 Park road, Toronto, on June 12th, the lumber industry of Canada has lost one of its most distinguished figures. Endowed with unusual business acumen, Mr. Waldie also displayed in all his dealings an unimpeachable integrity that has added in no slight degree to the enviable reputation that throughout a long business career has remained unsullied.

Seventy-four years ago Mr. Waldie was born in Howick, Roxboroughshire, Scotland. While he was still young, his parents came to Canada and settled in Halton county, where his early education was received. It was in Burlington, Ont., that Mr. Waldie first began business as a general storekeeper. Here he dealt extensively in grain and became interested in the shipping industry, which was at that time of considerable magnitude. Some twenty-five years ago Mr. Waldie went seriously into the lumber business, in which his progress continued unbroken until he was at the time of his death the second largest lumber operator in Canada.

To his fearlessness in buying, coupled with an unusual far-sightedness, much of this success was due.

In politics, also, and particularly in what affected his native county, Mr. Waldie was unusually active. He was enthusiastic in the interests of Burlington and it was largely due to his efforts that it was incorporated as a village, of which he had the honor of being the first Reeve. For five years he held this position. For two years he was Reeve of Nelson Township and for the same period Warden of Halton County. From 1887 till 1891 Mr. Waldie sat for Halton County in the Dominion Parliament and figured in four election contests in that constituency. During his Parliamentary term the Liberal party, to which he belonged, was in opposition, but this was rather more to the liking than otherwise of a man of Mr. Waldie's strenuous character, as he entered politics only at the urgent request of his friends, who realized that he possessed qualities of which the Opposition at that time stood much in need.

Up to the end of his life, although ceaselessly occupied with ever expanding business interests, Mr. Waldie never lost his love for Burlington, which was the recipient at his hands of many an unostentatious gift.

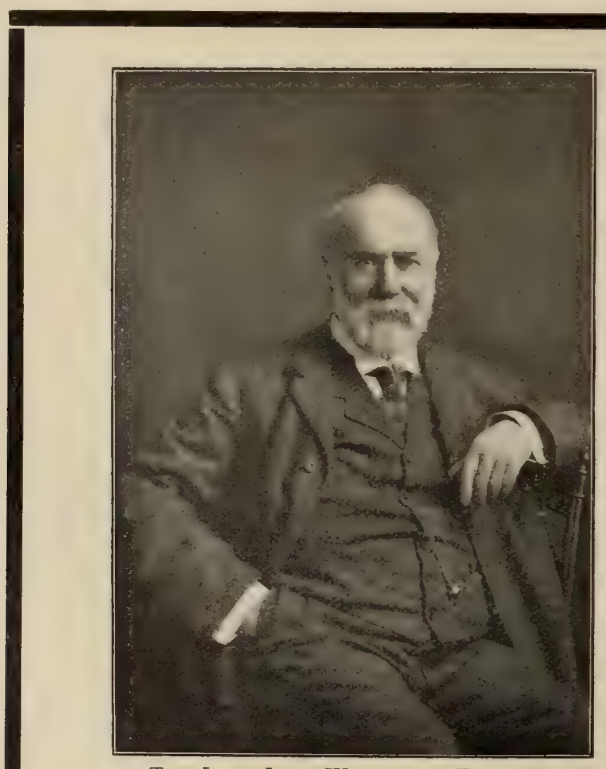
Although blunt of speech, the veteran lumberman possessed a kindliness of heart which exercised itself in many ways in adding to the comfort of his employes. As an evidence of his love for children, Mr. Waldie gave $5 to the mother of every child born to parents employed by him. To the comfort of his employes he always paid marked attention, erecting for them good houses, equipped with all sanitary conveniences, while his camps, mills and all in which he was concerned were models of good management and conducted with every attention to the welfare of his workmen. To the churches of all denominations he was a generous contributor and likewise to every worthy charitable object.

In the Presbyterian Church at Burlington, where the funeral services were held, were gathered together friends and neighbors from far and near, the last sad rites being conducted not only by the minister of his own church but by Episcopal and Methodist divines, who took occasion to show their appreciation of a friend whose void will be hard to fill.

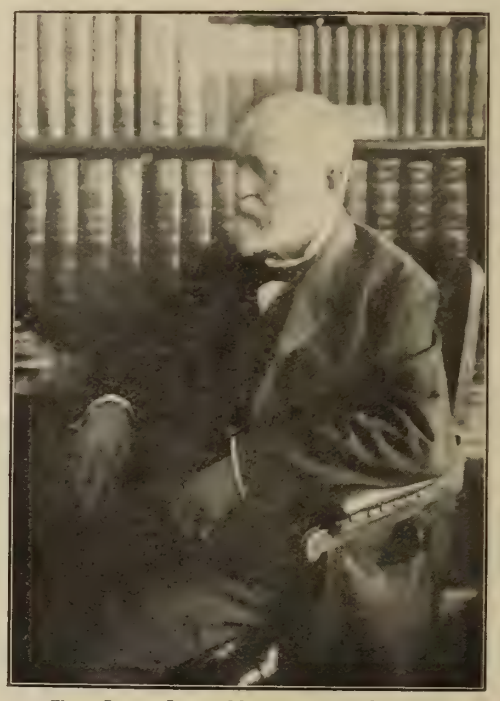
Mr. Waldie leaves behind him a widow, five sons and five daughters. The sons are: Messrs. William, who is in the mining industry in British Columbia; F. N., successor to his father in the lumber business; Robert S., of the law firm of Messrs. Meredith, Cameron & Waldie; W. S. and C. P., in the lumber business in Toronto. The daughters are Mrs. (Dr.) C. A. Temple, Mrs. R. C. H. Cassels, Mrs. G. E. Spragge, Ottawa, and Misses Marion and Lillie, at home.

As a successful lumberman, Mr. Waldie had few equals. He was not brought up in the bush or saw mill, but acquired a knowledge of the business somewhat late in life, in spite of whch handicap he had attained at the time of his death the second place in Canada as a holder of timber limits and producer of lumber. He was a man of unusual courage in the prosecution of his business. No transaction seemed to daunt him. He is said to have paid $50,000 spot cash for a short option at $1,000,000 cash for the Eddy limits on Lake Penage, while his recent purchase of the Cook Bros.' limits and mills at nearly $2,000,000 was another exhibition of his courage. In fact, John Waldie was without a peer in the lumber trade as a bold operator. It might be said that his absolute confidence in the ever increasing value of white pine was the making of his fortune.

Deceased was president and general manager of the Victoria Harbor Lumber Company, with large mills at Victoria Harbor. He was also a director of the Bank of Toronto, vice-president of the Landed Banking & Loan Company, Hamilton; president of the Maganetawan Tanning & Electric Company, Burk's Falls, and also of Tobley, Limited, Collingwood, both of these being leather con-



THE LATE JOHN WALDIE, OF TORONTO.



THE LATE JOHN MATHER, OF OTTAWA.

cerns. He was also a director of the Toronto Paper Company, Limited, and of the Canada Coating Mills, Limited. Besides these various enterprises he was interested in a number of smaller companies. Mr. Waldie was also an ex-president of the Lumbermen's Association of Ontario, in which organization he leaves behind him a name distinguished as much for commercial success as respected for his personal virtues.

THE LATE JOHN MATHER.

An old and honored resident of Ottawa and a well-known lumberman and capitalist passed away on June 5th in the person of Mr. John Mather, at the ripe age of eighty-three years. Mr. Mather's life was one of unusual activity. He was born in Forfarshire, Scotland, in June, 1824, the son of James Mather, an eminent builder and contractor, and inventor of the railway semaphore. As a youth the late Mr. Mather showed marked talent. He was a favorite pupil of Rev. Dr. Brewster, and acted as his assistant in those early experiments in electricity.

Mr. Mather was duly apprenticed as a shipwright and millwright. After he had learned his trade thoroughly he became manager of a timber and saw mill business in Montrose—the small beginnings of the large undertakings to follow. At that time he had tempting offers of promising positions, to go to Russia and to come to Canada. In 1857 he came to Canada as manager of the lumber business of the Gilmour Company, who had immense timber limits on the Ottawa, the Gatineau, the North Nation and the Lievre. The site of Ottawa, the Capital that was to be, was then only the village of Bytown.

For twenty years Mr. Mather lived at Gatineau Mills, near Chelsea, in immediate charge of the mills, and the other allied parts of the business, employing over 2,000 men. In 1876 he withdrew from the Gilmour concern, moved to Ottawa, and shortly thereafter built Munross, his late residence.

By 1878 he had made his first trip into Western Canada, with the development of which he was thereafter to have much to do. Among other enterprises of which he was one of the prime movers and controllers were the Keewatin Lumber & Manufacturing Company, with vast timber limits on the Lake of the Woods and in Minnesota, and the Keewatin Power Company, with a dam on the Winnipeg River, having a capacity of 40,000 horse-power. He believed that some day the water power through electricity would be used to operate the railways between Manitoba and the head of navigation on the lakes. In those days of the early eighties he had been joined by Donald A. Smith (Lord Strathcona), George Stephenson (Lord Mountstephen), and others, in establishing the Lake of the Woods Milling Company. He was identified with many other Canadian institutions and enterprises. Since 1880 he has been a director of the Bank of Ottawa; and for many years president of the Free Press Publishing Company of Winnipeg.

In politics the late Mr. Mather was a lifelong Liberal of the old school. He was a valued friend of Sir John A. Macdonald, and was on terms of intimate friendship with Hon. Alexander Mackenzie, who pressed him to accept a Senatorship. Mr. Mather's reluctance to enter official public life caused him to decline the honor. The charities of Ottawa have known him as a liberal and unostentatious giver. He took a keen interest in the foundling of St. Luke's Hospital and was chairman of the building committee. Ever a great reader and lover of books, his library yielded him constant satisfaction in the years since his comparative withdrawal from business. The accompanying portrait is a reproduction of a photograph taken in his library. In religion he was a Presbyterian. His tastes were towards science, history and biography. He leaves three sons, D. L. and Robert, of Keewatin, and Allan, of Ottawa. The only daughter is the wife of Prof J. W. Robertson, head of the Macdonald Agricultural College, at St. Anne de Bellevue.

SINGLE CUTTING VERSUS DOUBLE CUTTING BANDS.

OPINIONS FROM USERS OF THE LATTER ARE VERY FAVORABLE.

THE CANADA LUMBERMAN AND WOODWORKER has been requested to again publish some opinions regarding the relative merits of single cutting and double cutting band saws. Within the past few years there have been installed in Canada a number of double cutting bands, which appear to be giving good satisfaction. What some of the users think of them its set forth below:

THOS. DARLING & SONS, Wisawasa, Ont.; "Replying to your inquiry re the double cutting band mill which we put in after taking out the circular mill in 1906, would say it is a very great improvement on the circular, both in the quantity of lumber cut out of the logs and the quality of same. The band mill we have is the Waterous poney double band mill, and it is giving good satisfaction, both to us and our customers. We have had only one full day's cutting of pine so far this season, and that day we cut 34,700 feet. In cutting spruce, balsam and hemlock we have averaged up to 23,000 feet per day of ten hours, and some of these logs were very small. As for the difference between a double cutting and single cutting band, in the double cutting in spruce a circular will often jam, but in the double cutting band it will always free itself, and we have no trouble with it in any way."

CAMPBELL LUMBER COMPANY, Weymouth Bridge, N.S.: "We have a 25,000 ten hour day capacity double cutting band saw, which we purchased from the Waterous Engine Works Company last year, and we are pleased to state that so far it has been entirely satisfactory. Our experience up to now seems to be in getting the best steel for our saws, and getting the best filers; and when these saws are properly tempered and filed they do mighty fine work, and we expect before the season is out to saw 30,000 per day. The one great advantage that we find with band saws is that they save one-eighth inch saw kerf, and saw the lumber much smoother and cleaner than with the rotary. This saving of the cut alone is a great item, and most important. For instance, in every eight boards that you cut, you save nearly one board more than you would with the rotary, which with a Hoe saw would make one-quarter inch saw kerf."

GEORGE ST. PIERRE & COMPANY, Fraserville, Que.: "As to the relative merits of single and double cutting saws, we have not operated any single cutting saws, but we installed a double cutter last year. It is a poney band, of Waterous make, and it has fully met our expectations. Our object in installing this saw was to save lumber, as we believed that we could save 100,000 feet in every million. This saving has been accomplished, and from our experience we would recommend the use of the double cutter, and particularly when the logs are small."

THE CONGER LUMBER COMPANY, Parry Sound, Ont.: "We have been operating band mills for about ten years. Our first venture was a single cut 'Allis,' made by Waterous, of Brantford; after running it about three years we had it made into a double cutting band. This season we took out our gang, and put in another double cutting mill from the same firm.

"We may say that we have never had any trouble with our bands, and that we make good lumber.

"We would advise the use of the double cutting mill, especially if they are sawing up the entire log, as it makes just as good lumber and more of it, and it costs no more to run. There is nothing in our estimation that will cut logs averaging 100 feet or more to better advantage than a double cutting band.

"We use 11 inch saws, 14 guage (light)."

A VICTORY FOR LUMBERMEN

The lumbermen of the Southern States have recently been declared the victors in a long-fought battle against the railways to secure a reduction in freight rates. In 1903 the railroads leading from the south advanced the freight rate two cents per hundred pounds on yellow pine lumber shipped from southern mills to northern points east of the Mississippi River. Lumbermen protested to the Interstate Commerce Commission, and the Commission, after reviewing the evidence, declared the advance unwarranted. With this decision in their favor, they then carried the case into the courts, and in each instance the latter have upheld the decision of the Commission. Each time the railroads have appealed, and it was finally argued before the Supreme Court of the United States, with the above result. During the four years the roads have gone on collecting the advance, and lumber shippers have paid hundreds of thousands of dollars in freight bills. Undoubtedly numerous suits will now be entered to recover the amounts paid.

THE

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ADVERTISING RATES ON APPLICATION.

THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in every part of Canada in the lumber, wood-working and allied industries. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication in the WEEKLY LUMBERMAN the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN AND WOOD-WORKER is undoubtedly the most direct and profitable advertising medium. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

THE LIEN LAW IMPRACTICAL.

The efforts of the Western Retail Lumbermen's Association to secure amendments to the lien laws of the Western Provinces have so far accomplished nothing, nor is the outlook very promising. It has apparently been most difficult to persuade the legislators to take a reasonable view of the matter, the mere fact that the changes were asked for by lumber dealers leading to the conclusion that they were suggested solely in their interests. Such is certainly not the case.

The lien laws provide that a lien upon a building must be placed within thirty days after the material is delivered, and foreclosure made within ninety days. To the farmer particularly this is a hardship. His crops bring him only an annual return and he should be permitted to realize on them to pay his indebtedness. He buys his building material in the spring, and if he cannot pay at time of delivery, he is not likely to be in a much better position to do so until after his grain is marketed.

What has been asked for is a lien law which would extend the time for filing a lien to ninety days and for foreclosure to nine months or a year. Then the ordinary farmer would be given an opportunity of meeting his payments, and in many cases foreclosure would be found unnecessary. The seller would thus be protected, and the purchaser who needed the accommodation would suffer no hardship.

The development of Western Canada is being hindered by the present lien law. Many of the settlers have little capital; they rent some land, purchase stock and machinery, and then make such improvements as they can. A man who is thus making a home for himself needs the assistance of an equitable lien law. To-day, rather than sell lumber on time and rely on the existing laws, many dealers refuse to accept orders from persons who are unable to pay cash. The lien law is regarded as a farce so far as its application to country trade is concerned, and the suggested amendments would do much to build up the western country.

TAKE TIME BY THE FORELOCK.

Canadian lumbermen have had no cause to complain of lack of trade during the past few years. Taking the lumber industry from coast to coast, the volume of business has been more than the mills could conveniently handle, and the chief concern has been how to execute the orders. When will the present era of prosperity terminate is the question which is now being discussed by financial barons and by the heads of the great industrial establishments. By some we are already said to have passed the turning point, but the gloomy forebodings regarding the outcome of the crops, as the result of the backward spring and unseasonable summer, is no doubt largely responsible for this view Given another bountiful yield of agricultural products, which is not yet an impossibility, the pessimists would soon disappear.

In Canada no signs of trade reaction are yet in evidence, unless it be the sometimes unreasonable demands of labor unions. The building permits in Toronto for the month of May reached the phenomenal figure of $2,500,000. a substantial increase over any previous month in the history of the city. Only a few years ago this would have been regarded as a splendid record for the full twelve months.

What the future has in store time alone can tell. It is most reasonable to assume, however, that some time in the future conditions will become less prosperous. The business man should therefore give some consideration to the possibility of having to meet these changed conditions. To be forewarned is to be forearmed, and if the enemy fails to appear, the reward will be none the less pleasing.

So great has been the domestic demand for lumber in late years that foreign markets have been neglected. The Canadian mill man could see no necessity of continuing business relations with, perhaps, his old-time customers across the sea. True, our export trade in lumber with European countries is still large, but the showing has been maintained by the greater willingness of foreign buyers to accept the terms and conditions of the manufacturer. The Canadian manufacturer has fixed his price for stock at the mill and all buyers have had an even chance. The study of foreign markets has been neglected and little or no attempt made to acquire knowledge of their requirements. This is a mistaken though somewhat natural policy. The business of the British, German or French merchant may yet be prized, a fact of which Canadian lumbermen should take cognizance. Now is the time to lay the foundation for an export trade when domestic business is less prosperous.

Mr. J. S. Larke, the energetic Commercial Agent for Australasia, calls attention to the splendid opening in that country for British Columbia lumber. It appears that the Kauri pine of New Zealand is rapidly becoming extinct and that it has ceased to be a competitor to the timber of the Pacific coast. Manchuria pine is getting a foothold, as it is imported free of duty, but we understand that representations have been made to the Department of Trade and Commerce at Melbourne that in the revision of the Australian tariff this summer some special consideration should be extended to Canadian lumber, which is now dutiable at the rate of $3.65 per thousand feet.

THE SHINGLE TRADE.

There are 544 different concerns on the Pacific coast engaged in the manufacture of shingles—some of them exclusively and others in part only. Of this number 522 are on the American side of the border line, 453 being in the State of Washington alone, leaving but 32 in British Columbia. In other words, British Columbia produces less than 6 per cent. of the shingle output of the Pacific coast.

The British Columbia shingle has always been a favorite in the American market, because of its superior quality. The American demand for British Columbia shingles has been greatly enhanced by the inability of the American railroads to supply cars sufficient to handle the output of the American mills. As a result of this acute car shortage, the manufacturers in Whatcom, Snohomish and Skagit Counties, where the bulk of American Clear and Perfection shingles are made, have recently closed down, and will remain closed until July 10th, in order that the present accumulated stocks may be cleared out.

In connection with this car shortage on the American side, it might be pointed out that this is not likely to be very much relieved during the summer, as the fruit season is here, and this requires an immense number of cars to be supplied very promptly, as the bulk of this class of freight is perishable. Following the fruit season will come the wheat movement. Added to this is the fact that coal shipments this summer will probably be much greater than ever. In fact, the American railroads have stated plainly that little relief from the car shortage need be expected by the shingle manufacturers until next November, and no permanent relief within two years.

Taking all these facts into consideration, it would appear that the present heavy demand from the American market for British Columbia shingles is likely to continue, and present prices will not be lowered.

The Sheldon-Mather Timber Company, of Duluth, Minnesota, have opened up offices in the Davis Chambers, Vancouver, and are in the market for the purchase of timber. Mr. O. L. Mather, secretary-treasurer of the company, is in charge of the Vancouver office.

What Makes Lumber the Price it is To-Day?

At a recent convention of the Illinois Lumber Dealers' Association, the veteran secretary of that association, Mr. George W. Hotchkiss, read a paper entitled "What Makes Lumber So High." He treated the subject in a most practical and interesting manner, and we are sure his views will appeal strongly to Canadian lumbermen. The paper follows:

There never was a time when so many bugaboos were developed regarding the business world, and no branch of business has suffered unjust criticism to an equal extent with the lumber business, and perhaps no branch of the lumber trade equally with the retailers. The penny-a-liners of the daily press and the supposedly more intelligent writers for current magazines are fond of airing their ignorance of lumber conditions in the persistency with which they point out the existence of combinations among the lumbermen for the sole purpose of fleecing the poor consumer, usually, in their opinion, the oppressed farmer. In their judgment it has been and is an easy task to combine 100,000 or more manufacturers, wholesalers and retailers, in a great trust for the purpose of fleecing the unfortunate user of forest products. No account is made of the fact that to perfect a trust or combine it is necessary that there should be such a unity of effort as would suffice to weld into one compact and harmonious whole a vast army of diverse interests, interests which are constantly clashing and can no more be harmonized in unity than could the million and a half of farmers in the land be united in placing a price upon their grain or their butter and their eggs.

The Exhaustion of Timber Areas.

In the manufacture of lumber the white and Norway pine of the northern forests are in competition with the hemlock and spruce, and no less with the timber of the south and of the Pacific coast. With scarcely a vestige remaining of the rich white pine which fifty years ago was thought to be of inexhaustible volume, and was known to be of a character and utility unequalled by any other timber growth of this or any other land, is it any wonder that those who hold the small remnant remaining should place a value upon it, which in comparison with the days of its plentitude seems exorbitant? And what wonder that the despised timber of former days, the hemlock and tamarack, not to mention the southern pine and cypress, which were practically unknown in the northern market twenty-five years ago, nor yet the coast and mountain timber which its but now gaining a foothold, what wonder, I ask, that a lessened competition with white pine is forcing these woods upon the consuming public, and that all classes of lumber should advance in value proportioned to the expense of manufacture and transportation?

Values No Higher Than in 1872.

While lumber is no doubt high as compared with average prices of past decades, it is interesting to note that it is no higher to-day than it was in 1872, when the high price was not attributed to combine and associations. I have before me as I write the original of a bill of lumber sold by a dealer at Decatur, Ill., in July, 1872, and I find flooring quoted at $45 a thousand for white pine, a price fully a third higher than a more desirable No. 2 maple flooring is selling for to-day. I find shingles billed at $5, which is as high as the best shingles bring to-day. I find lath billed at $5, about the same as to-day; and the list as a whole discloses that at a time when there was no thought of exhausting forests, and no public turmoil over lumber trusts. lumber sold on its merits and in accordance with legitimate demand at as high average prices as are asked to-day. But there was then no cry of the robber lumber barons; the fact was recognized that there were more buyers than boards. I have had a photographic reproduction made of the bill of lumber above referred to, from which any person may make his own comparisons.

In order to ascertain how much difference there is between the prices of 1872 and those of the present time in the general filling of this bill, I have cut off all the figures on one of these photographic reproductions and sent the bare bill to a number of retailers in different parts of the state with the request that they give me an estimate at which they would fill the bill to-day from such material as would the nearest approximate the conditions existing in 1872. The bill for 1872 was sold for $182.

One party now offers to duplicate it for $169.56, another for $204.53, a third for $185.08, a fourth for $175.34, a fifth for $164.39, and a sixth for $172.13; a seventh for $184.52, and an eighth at $175.48.

Now, I assume that these figures show not only that such a bill can be obtained from the material in vogue to-day at an average no higher than it sold for thirty-six years ago, and also that the diversity of the estimates is conclusive proof that there exists in Illinois no combine on prices, but, as the estimates come from as many different sections of the state, that prices in different localities are wholly independent of those in other sections.

But what is the cause of the present high prices? In the decade 1850-1860 I bought lumber at $14 a thousand, which to-day would sell in the Chicago market at $80 to $90 if it could be obtained. I have bought potatoes at 25 cents a bushel and I have paid as high as $1.50 a bushel, and why the difference? It is easily explained that in one case there was a supply greater than the demand, and in the other the demand was greater than the supply. Taking the price of lumber in the interior of Illinois in 1872, the facilities for manufacture and transportation were not equal to the requirements of a rapidly increasing population; the law of supply and demand operated as it always does and is doing to-day.

In 1872 the forests of the north were practically untouched; there were but few or no railroads running into them. and the manufacture of lumber was practically confined to the banks or mouths of rivers, over whose waters logs could be floated to the mills, whence by vessel or raft the lumber could be transported to other points of water communication, whence it could be distributed mostly by them, slightly by rail, to more distant points where further progress could be by team. Mill machinery was comparatively crude, and improvements for more speedy and economical manufacture were but just developing. The forests, as then known in the north, embraced only about one-half the territory which by rail extension was soon after opened up and became crowded with mills, whose product, aided by increasing rail facilities into all sections of the country, soon placed a surplus on the market which held the price at a point which for many years was hardly remuneration.

The Beginning of the End.

About twenty years ago it began to be appreciated that the timber supply was not inexhaustible. Mills at various points on the lakes began to go out of commission, and presently those on the railroads found it hard to obtain timber, and one after another dropped out. Grand Rapids, with its eighty millions of manufacture a year Muskegon with its five hundred millions, the Saginaw valley with its eleven hundred millions, were in the almost total shut down of their mills (and all are gone to-day), evidences of the revolution which was fast closing down upon the lumber production. Up to this time nothing was considered as lumber except white and Norway pine; the latter. which thirty years ago was not thought worth cutting, having marched up to the side of its softer and more desirable brother. White Lake and Ludington on Lake Michigan were soon joined by Manistee and Traverse City, together with dozens of railroad mills, and the white pine trade of western Michigan has now become a thing of the past, and lumber is imported from Canada to supply local demands and local trade.

Was it legitimate for potatoes to reach $1.50 a bushel when the crop was short and the demand large? Why not also the value of lumber when the failing forests became practically extinct, not only in Michigan but in Wisconsin, where the principal river supply has so far failed that all the large mills have gone out of commission for the want of logs; and the Wisconsin, Chippewa, Black and St. Croix Rivers have ceased to pour their thousands of millions of logs and vast rafts of lumber into the manufacturing and distributing points of the Mississippi? So also the hundreds of railroad mills in Michigan and Wisconsin, which no longer add to the volume of production but have gone out of commission for want of timber. Will any one have the courage to assert that the consumptive demand has lessened?

The Use of Substitute Woods.

With the decadence of the white pine supply the demand for lumber has increased rather than diminished, and a substitute must be found. Less than twenty years ago hemlock was despised as of no value except for its bark for tanning purposes; standing timber was held at a stumpage value of 25 cents a thousand. To such extent has it now taken the place of pine, and so great is the demand for it not only as lumber but for the making of pulp, that recent bids have been made by the pulp mills of $12 and $13 a thousand feet for the hemlock timber of Wisconsin. Now add your saw bill of, say, $2.50, your handling expense and freight to the average point of distribution, say, $6 (a low estimate) and with an actual cost in his yard of, say $22 to $24, none will deny to the retailer the slim

profit of 10 per cent. for his labor, yard expenses, salaries, taxes, bad debts, and the thousand and one expenses to which he is subject.

Is it the fault of the retailer that lumber bears a comparatively high value? Does not the farmer look for higher prices for his potatoes and grain when his crops are light and the demand is great?

Increased Cost of Labor, Supplies and Stumpage.

Look a little farther: When stumpage in the northern forests was $2 to $5, the men in the camps were paid from $16 to $20 a month and board. The present wages are $30 to $50 per month, and none will deny that the expense of boarding the men is at least one-third greater than ever before. Is the manufacturer responsible for the increased cost of his logs, and the increased cost of manufacture? Must he not have an increased price to meet his increased expenses? Lucky indeed is he if he has something left of his own forests, bought at a low price in by-gone days, to draw upon; but is not his timber worth what he would have to pay to replace it if purchased in open market? Is he not warranted in invoicing it at its present market value rather than at the comparatively cheap price which it bore several years ago?

But with the decadence of the pine, and the all too limited supply of hemlock, which will at the present rate of consumption be gone within ten years at most (as commercial factor) the mills of the north which may still be in operation are depending upon mixed stock for their supply, and oak, elm, maple, basswood, black and white ash, tamarack and cedar constitute the log stock of nearly all the mills which are still in commission.

To again use the simile: Is it not apparent that the potato crop is limited, and that I have an honest right to ask an increased price for what I have got and my neighbors must have?

The Vicissitudes of Southern Pine.

But why is southern lumber so high, as this seems now to be our main dependence? It is but a comparatively few years since the southern lumber production assumed a position of prominence in our markets, but its advent was marked by vicissitudes and troubles. It was before the shortage of the northern stock was appreciated, and the competition with an article so universally esteemed as white pine sufficed to keep the newcomer greatly in the background. The mills of the south were not up to the northern standard, the operators had hazy ideas as to what could be marketed, freights were high and expenses heavy. In the finer manipulation, such as in the manufacture of flooring, each mill had its own standard of matching, which in too many cases was with the idea that the buyer would be compelled to renew his order with the seller, because he could not match his stock on hand with that of other manufacturers. Lumber was sold largely for what it could bring, stumpage was hardly thought worth while to count in figuring cost. Timber was sold at from 75 cents to $3 an acre, which brought stumpage value to from 10 to 25 cents. In order to introduce the lumber into northern markets it was sold at almost any price that was offered, and a large proportion of its was dear at any price. With improved methods of manufacture through the influx of northern operators and improved business methods and a lessened competition with northern pine, the southern manufacture rapidly increased, and the demand has kept up with the supply; in fact, through the difficulty of getting cars and the many delays in transportation, with the lessened competition of the northern product, and increased demand for southern pine, we have struck another illustration of the potato crop—more buyers than stock. Stumpage values are no longer on the 25 cent basis, but are figured at $2 to $4 a thousand feet and upwards. While, therefore, the southern manufacturer has no occasion to complain of his present percentage of profit, what is after all no more than he is justly entitled to, it is manifestly unjust to charge the high price of the product to the retailer, whose profits seldom exceed, if they reach, 10 per cent. net Compare with this the 25 per cent. to 50 per cent. average profit of the dry goods or grocery merchant, and who shall cast the stone of reproach at the lumber retailer?

The fact is that the present condition of the retail lumber trade is "a shortage of potatoes and hungry people demanding them."

The Howl About Thin Lumber.

I must not close this paper without reference to another point regarding which there is a disposition to throw stones at the retailer as well as at the wholesaler and manufacturer. That is, a complaint that lumber is not full inch and thereby the consumer is cheated out of one-sixteenth to one-eighth of what he pays for. None but an ignoramus who knows nothing of the lumber trade would raise this question, as it was raised in the last Minnesota Legislature by an honorable member who proposed penalty and imprisonment for this serious (?) offense. A recent writer in a Chicago paper, writing probably at a penny a line, found it convenient to charge the lumbermen with all sorts of crimes and misdemeanors in this respect. The fact is the consumer gets just as thick an inch board in his building as he ever did, with this difference, that when railroads carried lumber by the thousand feet it was shipped in the rough, and was dressed by the stalwart arm of the carpenter at the rate of two or three hundred feet a day (if he was an expert). When the roads adopted the system of charging by weight, the mill men at railroad mills and at wholesale points where lumber was brought by vessel and shipped out by rail, adopted the system of planing the lumber by machinery, so that the old-fashioned carpenter and the old-fashioned carpenter's shop have disappeared almost wholly, and with it the work of dressing the lumber by hand; but the consumer gets just as much lumber in his door jambs and window frames, and of a more uniform thickness than could possibly be obtained with the jack plane, and the wholesaler and manufacturer saves more than the cost of dressing in his saving of freight, while the consumer saves in the wages of the carpenter. Who is wronged?

The Old as Compared With the New.

This is an era of fraternalism in every legitimate line of industry, made necessary by the changed commercial conditions of the age. Our grandfathers were content to ride in the stage coach at a speed of eight or ten miles an hour; we are dissatisfied with the pokey railroad train at thirty miles an hour. Our fathers went into the woods and hewed out large timbers for the frame of a new house, while the thinner stock was cut in an upright mill at the rate of four or five thousand feet a day, and then piled for a year or two in the barn or attic to season sufficiently to be worked out by the carpenter and his apprentices. Lumber was sawed with one end wide, the other end narrow, and must be worked to even widths, at a great loss of time, and material, as well as the increased cost of labor. Flooring, when laid, was of uneven thickness, making a rough floor. To-day, through the very causes complained of, transportation is cheapened, labor expense is reduced, delay is avoided, and the builder gets a no less desirable article so far as his outside sheathing, door jambs, casing and other interior finish is concerned. His dimension sizes are not materially lessened, and do not require sizing, as when received in the rough.

To-day we turn out lumber in mills, cutting from 50,000 feet to 500,000 feet a day; we put it through dry kilns, and we dress it by machinery, and it is ready for use. Where is the carpenter and his jack plane? Our inside finish and our flooring is made in the big factory. We have no carpenters any more. Archichitects draw plans, and wood butchers without practical trade education nail up the prepared stock according to those plans. Where are the blacksmith shops which in our boyhood were to be found in every hamlet, and to which we took our broken machinery for repair?

The Rapid Disappearance of Timber.

Times have changed, and the era of ignorance of what our neighbor is doing has given place to an era in which success and advancement is contingent upon the knowledge gained by association with and learning the methods of what other men are doing. The change in the lumber trade and its methods have kept pace with the increased intelligence and increased population. A consumption of not more than ten billion feet in 1830 has given way to a demand for thirty or forty billion feet a year for building purposes, thirteen to fifteen billion feet for the railroads, and fully twenty billion feet for shingles, staves, posts, poles, pulp and kindred purposes, which are never mentioned in statistics. We are denuding the forests at the rate of seventy to eighty billion feet a year. How long can it last? The white pine is practically gone; hemlock in the north will, as a commercial factor, be exhausted within ten years. The southern states will be practically cut out within twenty-five years, so far as pine and cypress are concerned, and other and less valuable timber will have equally suffered denudation. Will the demand be lessened?

The Pacific coast timber will not last forever; Canada will help out under her restrictive laws but if every stick of marketable white pine between Labrador and the Rocky Mountains were thrown on the market, it would not supply the wants of the United States for two years. Spruce is not of inexhaustible supply, and is rapidly taking its place as never before; the coarser timbers, until recently esteemed as fit only for firewood, are already filling a recognized void.

Under these circumstances, is it not legitimate that those who do hold standing timber should know the value of it? Trees do not mature in a day, and it is much easier to detroy a forest than to grow one. The highest skill of man cannot grow a forest in less than fifty to one hundred years. If my improvident neighbors have wasted their potatoes, am I not warranted in getting a price for mine?

If I must pay $15 to $20 for white pine stumpage which formerly cost but $2 to $3, and for other timber at like prices; if it costs me 50 per cent. more to manufacture the logs in the forest and the lumber in the mill; if I must pay $5 a day instead of $1.50, must I not add it in the sale to the retailer and he in turn to the consumer?

Timber has advanced, labor has advanced, and the end is not yet. But is the retailer to blame? Must he not advance in proportion? To answer the question, "Why is lumber so high?" I have only to return to the simile: Potatoes are scarce; if you want what I've got, pay my price.

Is this not the legitimate logic of the situation?

LOGGING ON STEEP GRADES

The following letters from Manager T. H. McLafferty, of the Blumauer Lumber Company, Tenino, Wash. addressed to "The Timberman," Portland, Oregon, describes a simple yet very effective plan for operating on a steep logging road:—

"Replying to yours of the 8th relative to logging by rail on a 20 per cent. grade: The matter is so simple that it hardly needs an explanation, as any logger would see it at a glance. In the first place, it will only work when the 20 per cent. grade is either at the end of the road or when there is other power to take care of the cars after they get up the grade. We have worked this for about eight months and it caused absolutely no trouble or accidents. You will note from the enclosed rough sketch, which shows a level track for at least the length of the grade, then the 20 per cent. grade and then a level on top either at the yarding engine or for a continuation of the road over which other power must be used. The cable is stretched up the track, and if the track is crooked, must be made to follow the track the same as rollers are used with a road engine. This cable runs through a large tail block at the top of the grade and then returns to the foot of the hill by the straightest route, being held in place by blocks, and at the foot of the hill must be held by a strong block, so that when fastened to the locomotive it will have a straight pull. If the track at the foot of the hill is crooked, the line can be held by rollers, the same as on the grade. I think you will see how this operates at a glance. The locomotive takes the cars to the foot of the grade or to the end of the line which runs up the track, and these cars are uncoupled from the engine and attached to the line. The locomotive then goes back to the other end of the cable, which should be about 50 feet from the cars, so that when the line is pulled on, it will not bind on the cars. When the line is coupled to the locomotive it runs back over the level track and takes the cars up the grade. When they are loaded this action is simply reversed, the locomotive letting the cars down by returning. If the grade is very steep, such as from 14 to 20 per cent., the brakes on the cars should be set on a lesser grade and the locomotive will hold them. The derail switch should be placed at the foot of the hill and in such manner that the cars, should they get away, could not possibly run into the locomotive."

The above letter brought the following inquiries and Mr. McLafferty's reply:

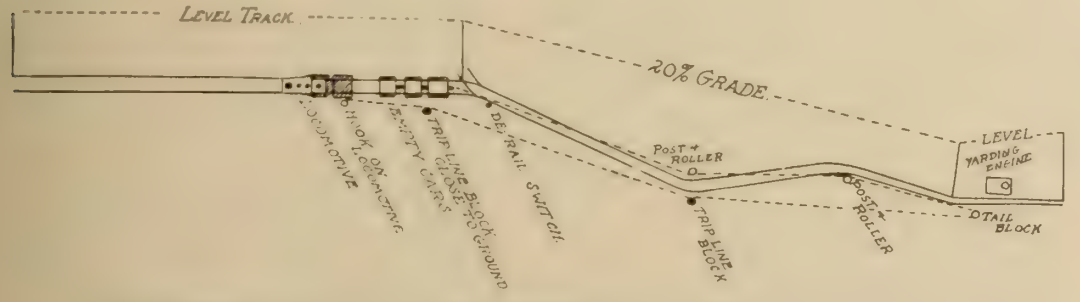
How long a distance do you pull the cars up the hill? How many cars do you haul at a load? How many feet do you load on a car? Do you top load? How do you couple the car? Do you use flat cars or trucks? Is it necessary to dog the logs to hold them on cars? What size cable do you use?

Our proposition is to haul the cars up a grade from 10 to 20 per cent., for a distance of 5,000 feet, which would require 10,000 feet of cable. We are trying to figure on using 5 cars for each load, or about 20 M feet of logs.

Do you think the load at top of hill standing on a 7 per cent. grade, will haul the 10,000 feet of cable back when the load is released? Our track would have three slight curves.

MR. MCLAFFERTY'S REPLY.

I have your letter relative to handling logs on a 20 per cent. grade, and will be pleased if I can help you out with what experience I have had.



PLAN SUCCESSFULLY USED FOR HANDLING LOGGING CARS ON TWENTY PER CENT GRADE.

I will answer your questions just as you ask them and just as we used the rigging.

We hauled 1,500 feet up a grade of 17 per cent. for the first 1,000 feet, and 20 per cent. the balance of the way.

We handled two sets of trucks at a load.

We averaged 6,000 feet per load.

We top loaded, putting as high as 14 logs on a truck.

We chained each outside log to bolster of trucks, using no other coupling. Between each set of trucks we used a long coupling of railroad iron.

We did not find it at all necessary to dog the logs.

We used 5-8 inch plow steel rope.

We used a 35 ton direct connected locomotive, which handled the work without any exertion whatever.

We fastened a heavy ring to the side of the locomotive tender frame so that the line would always drop to one side of the track, leaving track clear to run over while the locomotive came in to the landing with the logs.

We had our track level at the top of the hill and started the cars after chains were released, with the loading line. This worked very satisfactorily.

I think this information will show you just how the rigging worked for us.

Your proposition of hauling 5,000 feet makes it quite an undertaking, but I have taken it up with the locomotive engineer, who handled this for us, and with our woods superintendent, and they both agree with me that you will be able to work it in a very satisfactory manner if conditions are at all favorable to you.

In the first place, if you have a reasonably straight track at the foot of the hill with a little down grade running from the place you have to stop the locomotive and connect the cable with the cars, back over the part I have marked "level track" in my sketch, it will greatly aid the locomotive in pulling the empty cars up the grade and in holding the loads back coming down. The pulling of the empty cars up the grade will probably be as hard as any other part of the work.

The curves you have in your road do not make any difference whatever as long as you have rollers in good shape to catch the line. Place them just as you would in using them on a road line.

I would advise that you use not less than 1 inch plow steel rope, and would use new rope at that. This will stand a strain of about 85,000 pounds, and although your load will weigh about 200,000 pounds, the friction of the brakes and track, etc., will reduce this to well within the capacity of the line.

I would use a good sized tail block at the top of the hill and make it just as heavy as you possibly can, as the strain on it will be very great.

I do not think you will have any trouble whatever in starting the loads on a 7 per cent. grade, but should you have any I think this could be overcome by using the power with which you load to start the cars, or if you haul to the top of the hill with a locomotive you can use this.

For signalling to the locomotive at the bottom of the hill we used electric bells, but with the distance you have I would advise using a telephone, which will be just as cheap and probably more satisfactory, as sometimes your locomotive may have other work to do and your engineer could go to the telephone and find when the loads will be ready for him at the top of the hill, and then go on about the other work.

Do not neglect to put in a derail switch at the bottom of the hill, or better yet, a safety switch running on to a grade so that should the cars get away they will not be derailed and smashed up.

Unless you have a 4 or 5 per cent. grade leading up to the foot of the hill, I would not think that less than a 30 ton locomotive would handle five loads.

I think with the above information that you will readily see that the matter simmers down to just this: Your proposition will not give you the least trouble if, first, your rigging is strong enough to hold the strain, your locomotive is heavy enough to haul the emptys up the grade and brake the loads down, and then see that due care is used in signalling and operating. Have the engineer on the locomotive see that the loads pull him in letting them down the hill and keep them at an even speed without jerking, and see that the return line is put in in good blocks and that the ground is well swamped out where it runs so that it will run freely without catching.

THE Wood-Worker and Retailer

THE CHOICE OF SOLID STOCK OR VENEER.

By Chas. Cloukey, in "Wood Craft."

One of the handicaps under which some mill men labor is the mistaken notion that they should follow every detail of construction laid down by architects' details, and another one is that they are not able to do comparatively large work with ordinary equipment or at any rate with appliances which they can devise and make for themselves.

When it Pays to Veneer.

In the first place, it seldom makes any very material difference to the builder whether some of the work is veneered or solid, so long as the face work shows the proper wood and the construction is such that the various members will stay in place when completed and placed in their permanent positions. The primary idea in facing up jambs, casings and mouldings with the finish wood is to save material, but this is often accomplished at a positive financial loss when the important item of labor is figured in. If there are a great many pieces of the same size so that the clamps may be filled to advantage as well as an economical run on the cores and veneers beforehand, it may pay even to veneer 7-8 inch stock. It sometimes occurs that the stock of the finishing wood is so low that veneering is the only way out of the dilemma; but of course this has nothing to do with the general run of planing mill economics, and it is for general results that we are constantly striving. It is the habit of work that tells if we allow ourselves to form one, which I maintain we should not, but rather conduct every separate job so as to require the least material and labor to turn out a first-class product.

One class of details often furnished by architects call for the veneering of one side of a solid piece of lumber, such as panels, jambs, wide casings, baseboards and the like, as shown in Fig. 1. To the operator of little or no experience in this kind of work, the construction is liable to prove an expensive and exceedingly annoying experiment, for it is only with the greatest care and precaution that a good job can be turned off in this manner. In the first place, it is very difficult to get the cores and veneers of the same condition of dryness, and even if they are, it is nearly always true that one or the other will absorb more water from the glue than the other will and so warp the piece out of flat.

Troubles with Moisture.

The most common trouble is that the expensive woods are nearly always bone dry, while the cores are usually brought in from the yard a short time before the job is to be put up, and if they show dampness are put through the kiln, if the mill has one. If the job is to be put up with the one veneer, the stock should be stacked up with the veneers in place between the cores and the pile weighted down and left for a time sufficient to distribute the moisture equally between the veneers and cores, a time usually not less than three days, depending upon the thickness of the veneers, which in this class of work are usually not less than 1-4 inch. Then, after gluing, if it is inconvenient to let them stay in the press for a considerable time, the stack should be taken out as soon as the glue will permit and a caul or piece of common board placed on each side and the whole bunch held with hand screws until the moisture from the glue has been diffused throughout the cores and veneers alike. In case the stock is good and dry to start with, the small amount of water in the glue will not make the pieces very damp, so that the subsequent drying will not spring the pieces if they are kept on edge until it has been effected.

Veneer Working Methods.

Work of this kind should be coated on each side as soon as possible after coming out of the clamps, and if there is a suspicion that the cores are not as dry as they should be, at least two coats of lead and oil should be given the backs wherever the subsequent work will permit.

Experiments with Veneer.

Some foremen will allow enough thickness on this class of work to permit of straightening after the warping has stopped, but there is no question but that it is an expensive practice and it is cheapest even in mahogany finish to make the work solid.

It is pleasing to note that there is a better way if we have the temerity to use some of our own judgment in the matter—let the architect take a hint if he will—for it is a simple thing to put a cheap hardwood veneer on the back of the work. It is also easy to have both front and back veneers of the same humidity and so insure a straight piece, whether thick or thin.

Some other workmen do not know that staving up a core will not insure it staying straight when veneered only on one side, but that it will act very much the same as a solid piece of wood; so that in counter tops, for instance, where they are long and two feet or more in width, it is folly to try and stave up the backing and glue a veneer on the top. If it is impossible to get these tops already plied up from a panel factory, by all means make them solid if the lumber can be procured in 1 inch stuff. Fig. 2 illustrates a counter top made of 7-8 inch stuff, yet having a very massive appearance and is really a good top, being doweled and glued at the joints and the under side kerfed and cleated.

However, a contingency might arise under which it would be impossible to buy a plied-up top and at the same time the kind of wood required could be had only in veneers. Then the workman would be confronted by a condition and not a theory. The former suggestion of veneering both sides of the core with woods as nearly similar in texture as possible will apply here, and the top can then be put together the same as in the case of solid lumber.

Where Veneers are Objectionable.

It is a common sight in details to find interior sash and transoms to be veneered, and this is usually a senseless and puttering job for which there is no call outside of the architect's habit. They are exactly as good made solid and the details will not permit

the use of very thin veneers on account of the sticking, while if they have to be different woods on each side it is an easy matter to glue them up two ply.

The veneering of outside sash and windows should be of one detail and that should bring the joint inside of the glass, as shown in Fig. 3, and even then it is better to make the bottom rails solid if such a thing is possible, for the sweat or frost will sometimes run down the best kept windows, and the glue joints which are perfectly covered when the house is first painted will not always remain so; therefore, knowing as we do what water does to glue, the only permanently safe method is to not have any glue joints in the lower check or the bottom rail.

MAKING PANELS.

The making of wide flat panels is a proposition of another character entirely, and whether or not they should be made solid depends more upon the character of the wood texture than upon its cost, for it is frequently more expensive to ply up panels from cheap woods than to make them solid from the more expensive ones. Take red gum, for instance, where a selected figure is to imitate the interwoven grain of mahogany. It would be impossible to put up a solid panel so that it would stay straight unless it was quite narrow, that is, 12 inches or less. So that while the wood itself is comparatively cheap the cost of plying up is such that it will make an expensive panel, although it is possible for any mill equipped with a cabinet planer, band saw and plenty of hand screws to put up this kind of work as cheaply as it can be bought from a panel concern, in case the proper skill can be brought to bear in the preparation of the veneers. If the shop has no one capable of resawing and planing thin or cross-grained veneers without spoiling a large per cent. of the stock, it would be much cheaper to buy the panels already to put in the job. If the mill has a good drum sander, veneers that are too wide or too curly to put through the planer can be brought to a surfaced thickness with practically no loss from spoiled stock, although the power bill is necessarily higher in reducing stock with sandpaper.

Generally speaking, it is not necessary to make panels more than three ply, and this is especially true when all the stuff is got out in the mill where it is easy to make the middle member or core as thick as is necessary to bring the whole panel to size regardless of what the veneers may be. In panel works where all the core stock is made up of cheap cut veeners, the plies may be any number in thickness, and of course the more, the better the panel will hold its flatness.

RESAWING AND TAPING.

Where veneers are gotten out in the mill and have to be glued up in two or more pieces to make up width, it is best to resaw the pieces to about 1-4 inch in thickness and then glue up in the clamps, being careful the pieces match the way the grain runs, as well as the face for appearance, and if the stock can be brought to thickness on the planer so much the better.

In the planing mill very little is known of the taping machines and the quantity of thin veneer work done would not warrant the purchase of one, so that when it becomes necessary to join the edges of thin veneers, the workman must tack his veneer on top of a board, letting the edge come about even with the edge of the board so that it can be jointed off. In case the veneer is quite thin, the edge may be placed so as to slightly protrude between the edges of two pieces of board and in this position may be brought to a straight edge, either by hand or by running over the jointer. But in this last operation it is necessary to see that the two pieces of board are clamped up tight against the veneer or the latter will be torn at the edge by the jointer knives. The work of gluing the edges of this thin stock is accomplished by placing the veneers on a wide board or bench and holding them in place by strips which are bradded through the veneers into the table, and after the edges have been glued cover the joint with a piece of tough paper glued fast to the wood and held down flat by another strip, which should be left in place until the moisture from the glue has passed out of the veneers. This strip of paper should be placed on the face side of the stock, so that it will not interfere with the subsequent gluing and will also protect the joint until the panel is ready to clean up.

Usually it is not considered necessary to glue up the core or middle ply for panel work, but it suffices that the pieces are of an even thickness and joined on the edges so that they will fit up closely together. Some glue men do not take the trouble to glue both of the contact faces, but it is safer to do this and by so doing the glue can be spread thinnor on each piece, with the assurance of having all the surfaces covered.

GLUING AND CLAMPING.

Perhaps nothing has more to do with a successful job of this kind than to be entirely ready to dispatch the work before beginning to spread the glue. If the glue chills before the pressure is applied it will be impossible to squeeze out the surplus and so the result is an inferior job, which will require a great deal more time to dry sufficiently to be taken out.

If the job has been done where there are no clamps or presses large enough to take in the work, two cauls should be provided which are slightly wider and longer than the desired panel, between which the veneers may be clamped. As it is unusual to find wide boards perfectly flat, care must be taken that the crowning side of the cauls are placed next the panels and a number of pairs of cross-pieces should be provided, as shown in Fig. 4, by which to clamp the whole together. These last pieces should be slightly crowning at the middle also in order that the pressure may come upon the middle of the panel first and so force out the surplus glue. One of the precautionary measures that should not be overlooked is the fastening of the veneers and cores together with small brads very close to the ends, so that they will not move in handling or slide at the beginning of the clamping process. If the room and the cauls are warm and there is plenty of fast help it will be economy to put in two panels at once; more than this can hardly be handled successfully with hand screws and then they must be left in the clamps long enough to thoroughly set before opening up. It should be remembered also that the thinner the plies of the panel the longer it should be left in the clamp on account of there being more moisture in proportion to the amount of wood to take it up.

PANELS WITH MATCHED JOINTS.

Wide solid panels may be made with a matched joint if there is a liability of the joint taking moisture. The wood should be selected with reference to the lay of the grain, os that if there is a tendency to warp it will not warp in a reverse curve, as shown at A in Fig. 5. At B in Fig. 6 are shown two pieces joined so that if they warp at all it will be in the same direction and may be corrected by proper application of heat and moisture.

In all glue work, whether solid or veneered, be sure that everything that can be done beforehand is ready, for in the ordinary mill without a separate glue room, the element of time is more important even than the quality of the glue.

DOUBLE-CUTTING BAND MILL RECORDS.

Parry Sound, May 15, 1907.

Editor CANADA LUMBERMAN AND WOOD-WORKER, Toronto:

Gentlemen,—In your May number you have a paragraph headed "Double Cutting Band Mill Records," which so far as it goes is interesting, but unsatisfactory. I should like to have a few more particulars so as to get a better understanding of the record.

The superintendent states that "the logs at the time of this run were not any larger than the usual run of logs." This is meaningless. If you can in your next issue answer the following quetsions, I shall feel much obliged.

What was the average size of the logs per thousand? What sort of timber—pine, hemlock or spruce? What was the average of thickness cut?

Yours truly,
A SUPERINTENDENT OF A DOUBLE CUTTING BAND MILL.

The El Doradõ Lumber Company, of San Francisco, send us the following in reply to our request for additional information:—

"The logs averaged from 36 to 50 inches in diameter, all 16 feet long. Of this timber 15 per cent. was sugar pine, 65 per cent. white pine, 10 per cent. white fir, 7 1-2 per cent. Douglas fir, and 2 1-2 per cent. red cedar. The lumber was practically all 1 1-2 inch in thickness, from 8 to 18 inches wide. This stock was cut 1 5-8 inch in thickness, which is 1-16th more than usual, so as to allow for the proper thickness for resawing for sash and door work, which would indicate that we really cut more footage than these figures show. We enclose herewith extract from our May mill cut, which is even better than the report you refer to in your letter."

EXTRACT FROM EL DORADO LUMBER COMPANY'S MILL CUT.

May 6th, 93,228 feet, 10 hour day; May 8th, 86,213 feet, 9 hours 30 minutes; May 9th, 90,357 feet, 9 hours 57 minutes; May 10th, 92,676 feet, 9 hours 30 minutes; May 14th, 91,576 feet, 9 hours 15 minutes; May 15th, 93,669 feet, 10 hours; May 16th, 95,001 feet, 10 hours; May 17th, 88,761 feet, 9 hours 25 minutes; May 21st 92,415 feet, 9 hours 58 minutes; May 23rd, 88,521 feet, 10 hours.

WESTERN CANADA

Western Offices of The Canada Lumberman,
615 Hastings Street, VANCOUVER, B. C.; 720-721 Union Bank Building, WINNIPEG, MAN.

TIMBER LANDS OF BRITISH COLUMBIA

For some time past it has been recognized by many of the business men of Western Canada that the most valuable timber tracts in British Columbia and Alberta were being bought up and otherwise secured by speculators living outside these provinces, more particularly from the neighboring Republic. These investors saw that conditions which existed in the middle west and western states a decade ago were repeating themselves on the British Columbia coast to-day, a district where timber limits are bound to increase very rapidly in value in the near future as they have on the coast states south of the international boundary.

It is well known that the United States Government has recently set aside very large reservations of timber and in many other ways have enacted very stringent laws respecting timber which has necessitated the exploiting of other fields looking to the future. There is no question, however, but that with the building to the British Columbia coast of the Grand Trunk Pacific Railway and the Canadian Northern Railway, and the manner in which nearly all the best timber in British Columbia is now held, either by individuals or corporations, timber will change as a commodity from an indifferent to a desirable holding. Then, too, until recently the scarcity of Canadian bottoms for handling lumber has largely retarded the export trade, particularly to the Orient. This latter condition, however, is being remedied and, in the near future, the export trade from the coast will rival the exportations to the interior. Lack of transportation has also somewhat retarded the lumber business, which, to some extent, will be met by the building of the railways already referred to and by the extension of the Great Northern Railway system into British Columbia. This will in turn demand a very much greater capacity for the manufacture of lumber and a consequent demand for limits.

Elsewhere in this issue will be found the advertisement of a new company—the North British Columbia Exploration Company, Limited—recently formed for the purpose of operating in timber, more particularly in British Columbia and Western Alberta.

The stockholders of the company have been drawn from the most successful business men and lumber dealers, amongst the latter being R. A. Mather, of the Keewatin Lumber Mills; R. W. Gibson, of Cedar Lake Mills; Turnbull-McManus and W. Morkill, lumbermen, of the City of Winnipeg, and C. H. Enderton, G. W. Walker, James Scott, Arthur Stewart, and others of Winnipeg's wealthiest financial citizens. The president of the company is R. C. Macdonald, one of Winnipeg's best known real estate operators, and who has been a resident of the West for the past twenty-eight years. The western end of the business is handled by H. P. Simpson, the secretary-treasurer, whose head office is at Victoria.

The company has a number of cruisers engaged permanently and have purchased large tracts of valuable property and in addition, owing to their large connections and the extent of their ramifications, control large tracts of timber throughout British Columbia, including Vancouver Island.

This company should prove a distinct factor in the lumber world in the near future, and we bespeak for them a very successful business career.

HOO-HOO CONCATENATION AT BRANDON.

Victoria Day was made a joyous event at Brandon, Manitoba, and one of the features of the celebration was another round-up of the Western Hoo-Hoo, in which twelve blind kittens, who were found wandering in the darkness far out upon the lonely prairie, were captured and treated to a feast in the onion bed. After perambulating East and West, they were permitted to gaze upon the effulgent rays of the Great Sacred Black Cat.

The following lumbermen were initiated:

John Hanbury, Brandon, Man.
James Windover Robinson Red Deer, Alberta.
Robert F. Hay, Winnipeg, Man.
Charles Ernest Ayre, Brandon, Man.
Edward Vaughan Williams, Brandon, Man.
Edward A. Harris, Winnipeg, Man.
Charles Theophilus Hilchie, Brandon, Man.
Henry Kitchen Agnew, Brandon, Man.
Frederick William Sullivan Locke, Brandon, Man.
Henry Ward Harvey, Antler, Sask.
John Alexander Garbutt, Margaret, Man.
Thomas Passenger Stockdale, Brandon, Man.

A large number of old-timers came from Winnipeg, Regina, Portage la Prairie, and other places, to assist in the concatenation, the officers of which were as follows:

Viceregent Snark—J. A. Ovas, Winnipeg.
Senior Hoo-Hoo J. C. Graham, Winnipeg.
Junior Hoo-Hoo—S. L. Raymond, Brandon.
Bojum—H. S. Y. Galbraith, Winnipeg.
Scrivenoter—J. J. Shotwell, Brandon.
Jabberwock—Geo. H. Anthony, Winnipeg.
Custocation—W. F. Hanbury, Brandon.
Arcanoper—J. A. Flavelle, Brandon.
Gurdon—E. R. Birnie, Nelson, B.C.

Everybody had a real good time, and the session on the roof was a first-class one. The refreshments and entertainment were notable.

It is expected that another concatenation will be given in Regina during August.

INCREASE IN TIMBER LICENSES.

The issuance of timber licenses by the Lands and Works Department of British Columbia for the month of May breaks all previous records.

The total sum contributed from this source to the Provincial Treasury in that period was $137,000, the largest amount on record. Only one of the closing months of the past year, with a total of $120,000 to its credit, comes near the amount mentioned.

It was expected that the demand for timber would slacken as the summer advanced, but instead there has been an increase in business. In addition the officials are confronted with another duty besides the granting of licenses, for they have to adjudicate protests which are being received from some of those to whom timber limits have been given. The reason for the trouble is that the area available is becoming much more limited and consequently the different owners are beginning to "step on each other's toes." The timber most in demand is that of Vancouver Island.

THE BOWMAN LUMBER COMPANY.

The Bowman Lumber Company, of Revelstoke, B.C., are running both their plants, at Revelstoke and at Comaplix. The former is turning out about 50,000 feet of lumber per ten hours, while the latter, which is running with double shift, is cutting over 150,000 feet every twenty hours. During the winter shutdown they installed a new 72 inch x 16 feet Canada Foundry Company boiler at the Revelstoke plant, and also built a new dry kiln there.

At the Comaplix plant they have erected an extra large dry kiln and a large shed for dry lumber and moulding. They are thus enabled to keep all the dry lumber under cover. Here also they have built a large new office and store building, and at the time of writing have a number of cottages for the men in course of erection. These cottages are fitted up for occupation by four men, each man

having a single iron bedstead with springs and mattress.

The basement of the new store building is used for warehouse purposes, where they carry a large stock of general merchandise.

The ground floor is used for store and local office for the mill. The upstairs contains eight bedrooms for the local office staff and men in charge of different departments of the plant; also a large lounging room and a modern fully equipped bathroom. The building is steam heated throughout, a separate boiler having been installed for that purpose.

In the winter crop of logs for the Bowman Lumber Company there is about one million feet of choice white pine of good size, the logs averaging from six to twelve hundred feet of lumber to each log.

The mill is cutting white pine stock 2 inches thick and 32 inches wide.

Since the Bowman Lumber Company took over the plants of the Yale-Columbia Lumber Company all the selling of the cut of these mills has been handled through the company's head office at Revelstoke. With the five mills of the two companies in operation, they have a total selling stock from the combined mills of about 80,000,000 feet per year.

BRITISH-AMERICAN OIL REFINERIES.

A company known as the British-American Oil Refineries, Limited, has just been organized in Vancouver, amongst the directors and shareholders of which are some of the most prominent bankers and business men of the Pacific coast. The directors of the British-American Oil Refineries are:—Henry J. Crocker, of San Francisco; Lester W. David, president of the Fraser River Saw Mills, Limited, of New Westminster; Harry Abbott, Vancouver; Maurice Casey, capitalist, San Francisco, and J. R. Owens, manager of the British-American Lumber & Trading Company. Mr. Owens will be the manager of the company, which is capitalized at $500,000.

Mr. Owens announces that the work of erecting a refinery will commence at once, as soon as a suitable site has been decided upon and secured. A location which will admit of running of a pipe line to tide water is all that is required, and provision will be made for the extension of such a pipe line from the refinery to the tracks at deep water, through which the crude oil, brought from the California wells by the company's own tank steamers, will be pumped. A second line will supply the oil-burning steamers with fuel oil from the refinery.

The use of oil for fuel in connection with steamships has been found more satisfactory and economical than the use of coal.

When the building has been completed a plant will be installed, which will be capable of treating 42,000 gallons of crude oil per day, and it is likely this capacity will be doubled before long. Forty-two thousand gallons of untreated product will yield approximately 1,260 gallons of 72 per cent. gasolene, 3,780 gallons of water white coal oil, and 26,000 gallons of residium or fuel oil.

The company has entered into a contract with Mr. Henry J. Crocker, one of the directors, and the Graciosa Oil Company of San Francisco, to supply, during a period of five years, 12,500,000 gallons of crude oil per annum. The company in which Mr. Crocker is largely interested owns 7,500 acres of oil fields in Santa Barbara County, California.

This scheme is of particular interest to the export lumber mills, as many of the oil-burning freighters can now load lumber and fuel-up at Vancouver. The "Woodford" is an oil burner, which is now loading about 1,500,000 feet of lumber at the Fraser River Saw Mills, Millside, B.C.

PERSONAL.

Mr. A. H. D. Ross, of the Forestry Branch of the Department of the Interior, Ottawa, has been appointed lecturer in forestry at the University of Toronto.

Mr. Fred. T. Smith, sales manager of the Haskell Lumber Company, Fassett, Que., was a recent visitor at the office of THE CANADA LUMBERMAN AND WOODWORKER.

Mr. J. J. McFadden, of Sault Ste. Marie, Ont., was a recent visitor to Toronto. Mr. McFadden is a prominent lumberman and is operating extensively on the north shore.

Word was recently received in Toronto of the drowning at Lake Biscotasing of Mr. William B. Westby, one of the fire rangers in the employ of the Department of Lands and Forests.

Mr. Wm. Darch, who operates a saw mill near West Lorne, Ont., had the misfortune, on June 6th, to have his right hand caught in a saw and so badly injured as to render amputation necessary.

A fatal accident occurred about two weeks ago at Dunvegan, near Edmonton, Alta., when Mr. Jas. Higgins, foreman in charge of a saw mill owned by Mr. A. Brick, M.P.P., overbalanced and fell on a circular saw.

The position of financial manager and secretary-treasurer of the DeLaplante Lumber Company, Toronto, has been accepted by Mr. McLaren, who, for several years, was manager of the Bank of Ottawa at North Bay, Ont.

Mr. G. D. McKay, of Vancouver, B.C., has been appointed Chief Fire Warden for the coast district of British Columbia. Mr. McKay will appoint fifteen or more deputies at various points along the coast, who will patrol the timber areas and prevent the spread of fire.

Hon. Frank Cochrane, Minister of Lands, Forests and Mines, recently returned from a European trip. It is understood that he intends leaving shortly for a personal inspection of certain sections of New Ontario. In this way he hopes to become thoroughly acquainted with the situation and thus be in a better position to settle the various disputes which are brought to his attention.

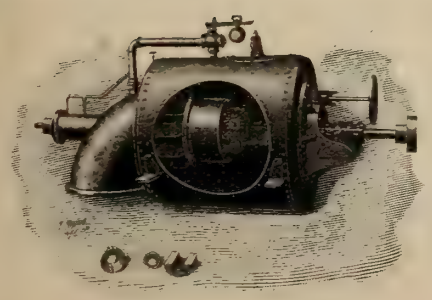
Mr. Thomas Simmons, mechanical superintendent for the James Maclaren Company, Limited, of Buckingham, Que., died May 27th from injuries received while superintending certain repairs in connection with the power house at the mill. For a number of years Mr. Simmons was a traveller for the Waterous Engine Works Company, of Brantford, Ont., accepting his position with the Maclaren Company in February, 1906. He had just completed the erection of a new mill for this company which had been built according to his plans, and which was about to be put into operation. Mr. Simmons was a general favorite with all who knew him, of fine physique and never failing geniality.

SHAVINGS.

When lumbermen bid seven dollars a thousand for jack pine timber, as was done at the recent sale of timber on the Fond du Lac reservation near Cloquet, Minn., it is pretty evident that lumber must be of value in order that they may come out at the right end of the horn.

A Minnesota court has rendered a decision to the effect that timber cut for removal to another state is taxable in this state up to the time it is started on its way. After it has once been started, it is merchandise in transit and is not taxable, but when banked and not yet delivered to a common carrier it must pay where it lies.

The company now operating on the St. Croix River raising sunken logs have found many that must have been at the bottom of that stream for as long as forty years. Some of these bear log marks that are no longer recognized as belonging to concerns now in existence, and whose names are not now familiar. All of them are, however, almost as sound as the day they went to the bottom.



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Various styles of setting to suit different locations and heads up to 150 feet. If you have a Water Power to develop, we should be glad to have you write us. Ask for Bulletin No. 200.

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THE NEWS

ONTARIO.

Mr. T. Wooster has sold his planing mill business at Aylmer.

A saw mill at Woodham, owned by Mills & Wynn, was destroyed by fire last month.

Brown & Company, who operated a planing mill at Stratford, have sold out to Pfeffer & Schlemer, of Tavistock.

Notice has been given of the change in the name of the Stephenson Belting Company, Limited, to the Haigh Company, Limited.

Mr. Fred. C. Barrett, of Adelaide, recently suffered a loss of $10,000, when both his grist and saw mills were destroyed by fire.

By an Order-in-Council, dated May 24th, the name of the Cook & Bros. Lumber Company of Ontario, Limited, is changed to Waldie Bros., Limited.

On the morning of June 3rd, Kennedy & Davis' saw mill at Lindsay was burned to the ground. The loss was heavy, though partly covered by insurance.

Notice of the incorporation of the Niagara Lumber Company, Limited, has been given. The head office of the new concern is at Niagara Falls, the capital $40,000, and the board of directors consists of F. W. Griffiths, W. H. McGuire and F. E. Franz.

Mr. Justice Riddell has dismissed the action brought by J. R. Booth and the executrix of Alexander Lumsden against the Temiskaming & Northern Ontario Railway and A. R. Macdonell. The suit was for $6,700.84 for timber alleged to have been cut by the defendants on timber limits leased by the plaintiffs.

The Haskell Lumber Company, Limited, of Fassett, Que., are building another four miles of logging railroad, which will give them a total of eleven miles. This company own their limits in fee simple, the timber consisting of pine, hemlock and hardwoods. Their mill is situated on the north shore branch of the C. P. R., between Montreal and Ottawa.

The Town of Collingwood was the scene of a disastrous fire on June 10th, the object of destruction being D. G. Cooper's saw mill. The machinery had just been overhauled and everything put in shape to handle a large cut this season, and consequently the loss is heavy. Mr. Cooper intends to rebuild on a much larger scale, installing the most modern machinery, and hopes to be in a position to resume cutting next spring.

The Provincial Treasurer has forwarded to the Montreal River Pulp & Paper Company a cheque for $20,000. The company was granted a pulp concession by the late Government and was required to pay the sum mentioned to the Province as an earnest that the conditions of the lease in regard to development would be carried out. The present Government cancelled the concession on the ground that the terms had not been complied with and released the property to a syndicate headed by Mr. J. R. Booth, of Ottawa, receiving a bonus of $300,000 from the new concessionaires. The deposit of the first company has now been returned.

Mr. C. A. Foster, of Haileybury, Ont., has recently built a new saw mill, 36 x 130 feet, in which he has installed a No. 2 circular made by the Wm. Hamilton Manufacturing Company. This is to be supplemented immediately by an eleven-saw Kendal gang, which will increase the capacity to 60,000 feet per day, and lath and shingle machinery. There is also a planing mill 30 x 50 feet, the machinery in which consists of one variable self-feed rip saw, one four-sided moulding machine, one planing and matching machine, one double surfacer, one wood turning lathe and one block machine, with grinding machinery, all made by the McGregor-Gourlay Company, of Galt, Ont. The planing mill is equipped with fan and shavings conveyors made by Sheldons, Limited, of Galt.

THE EASTERN PROVINCES.

The Hall Lumber Company purpose establishing a new mill at McLeod's Crossing, Que.

The mill owners at St. John, N.B., are this season giving their employes an increase in wages of 10 per cent.

The mill and plant of the Tobin Manufacturing Company at Bromptonville, Que., was seriously damaged by fire on June 2nd. The loss was covered by insurance.

C. A. Paquet & Company were recently in communication with the Quebec City Council regarding a site on which to erect a factory for the manufacture of woodworking machinery.

D. F. Naxwell, A. E. Vessey and N. M. Mills, all of St. Stephen, N.B., are among the incorporators of the Wapskehegan Lumber Company, Limited. The capital of the new concern is $24,000.

Desautels & Hevey, saw mill owners, St. Barnabe, St. Hyacinthe County, Que., have dissolved partnership, while J. Bte. Desautels and A. Lafrenaye have registered at the same place, under the name of Desautels & Lafrenaye.

The grist and lumber mills of Jules Patry, near Papineauville, Que., were destroyed by fire on June 6th, caused by the explosion of a tank of gasoline. Some hardwood lumber situated near the mill was also destroyed. The loss is estimated at $5,000

The Quebec Government has incorporated the Emberton Lumber Company, Limited, of Megantic, Que., with a capital of $20,00. Among those interested are J. E. Roberge, of St. Vital de Lambton, and E. Huard, P. H. Renaud and Eugene Huard, all of Megantic.

A serious fire occurred in Montreal on May 24th, when Mr. B. Grier's saw mill, corner Canning and Notre Dame streets, was destroyed. The blaze made rapid headway and, aided by the wind, destroyed the mill and contents completely. The loss was about $15,000.

The woodworking factory of Geo. S. Eddy at Bathurst, N.B., was destroyed by fire on May 29th. The dry kiln, which was filled with valuable hardwood, and a large quantity of lumber in the yard, brought the loss up to $12,00, on which there was no insurance.

J. E. Sauve, Limited, have obtained a Dominion charter to transact a general lumber business, with head office at St. Louis, Que. The capital authorized is $40,000, and the incorporators include J. E. Sauve, R. Sauve, G. Poliquin, all of St. Louis, and F. Gaboury and A. Bigras, both of Montreal.

The Carleton Woodworking Company, Limited, is the name of a new concern which has been incorporated by the New Brunswick Government to carry on a general woodworking business for the manufacture of sashes, blinds, house and office furnishings. The head office is at Woodstock, N.B., and among the incorporators are I. W. Fisher, C. M. McCormac, and G. A. Nevers, all of Woodstock, and F. H. Olmstead, of Grafton.

MANITOBA, SASKATCHEWAN AND ALBERTA.

Heyden, Max & Company, Limited, lumber and hardware dealers, Lanigan, have commenced business.

The Galvin, Walston Lumber Company have purchased the lumber business of Mr. W. Small, of Wadena, Sask.

The Saskatchewan Government have recently granted a charter to the Saskatchewan Sash & Door Company, Limited.

A planing mill at Carman, Man., the property of Mr. W. Guardhouse, has been destroyed by fire, resulting in a loss of $4,000.

It is understood that Mr. Geo. Ritz, of Humboldt, Sask., is negotiating for the sale of his lumber business to the Galvin, Walston Lumber Company.

The O. C. King Lumber Company, of Humboldt, Sask., have sold out their business to the Saskatchewan Elevator Company. Mr. O. C. King will enter into business at Quill Lake.

The Revelstoke Saw Mills Company, Limited, were recently negotiating with the City Council of Moose

Saw Mill at Rainy Lake, Ont.
Yards and Planing Mill at Hamilton, Ont.
THE
M. BRENNEN & SONS
MFG. CO. LTD.
HAMILTON, CANADA

TENTS

We are the Sole Manufacturers of the

CELEBRATED GOUROCK TENTS

Our Lumbermen's and Contractor's tents made from Birkmyre's Waterproof Flax Canvas cannot be equalled. This Birkmyre's Cloth is Waterproof, Rotproof, and will not mildew. Will easily wear for years.

The Gourock Ropework Export Co., Limited

Tent and Cordage Manufacturers, MONTREAL

Jaw regarding the purchase of a site on which to establish a large sash and door factory and lumber yard.

Neilson & Tyson, sash and door manufacturers, Winnipeg, have decided to remove their entire plant to Portage la Prairie. They have already purchased the necessary site for their buildings, and expect to be ready for business in their new quarters this fall.

BRITISH COLUMBIA.

The Edmonton Logging Company, Limited, of New Westminster, has been succeeded by Stacey & Garland.

The Jordan River Lumber Company, Limited, and the British Columbia Loggers' Association, have been incorporated by the British Columbia Government.

The mill of Mr. W. E. Laking, at Cloverdale, was visited by fire recently. The dry kiln was saved after a great deal of difficult work, but the loss on the mill and contents proper is about $8,000.

J. W. Davis & Son, the well-known Washington lumbermen, have secured a site on the south bank of the Fraser River in the vicinity of New Westminster, on which they purpose erecting a modern shingle mill.

Fire at Vernon on June 5th totally destroyed a saw mill formerly owned by C. O'Keefe, which was acquired a few days previously by Messrs. J. Glover, A. W. Barr and S. Polson, and recently operated by J. A. Baillie.

Mr. F. Hewitt, a contractor of Vancouver, has purchased the Genoa mill, near Cowichan on Vancouver Island. The mill will be completely overhauled and enlarged and dry kilns built. Between 100 and 150 men will be given steady employment.

Mr. Thos. Meredith and W. Gibson, two capitalists of Winnipeg, have purchased the interests of the Anglo-American Lumber Company of Vancouver. This includes the mill recently erected at Burrard Inlet, which has an output of 10,000 feet per day.

The Gibbons Lumber Company, Limited, with a capital of $250,000, has been incorporated at Revelstoke, to acquire and operate the mill and limits recently purchased from the Pingston Creek Lumber Company, Limited, by Messrs. Meredith, Fraser & Gibsons.

It is understood that the Porto Rico Lumber Company, of Nelson, B. C., intend to move their saw mill plant, which is at present located at Ymir, B.C., a few miles south of Nelson, to a point on the west arm of the Kootenay Lake, not far from Nelson, as they own several timber limits adjacent to the lake.

Within three weeks of the first fire, the office and store building of the Brunette saw mill at New Westminster was burned. The first fire, which did damage to the extent of $15,000, and which occurred on May 11th, was followed on June 2nd by the destruction of the office and store, with contents. The origin of the fire is a mystery.

The Redcliffe Lumber Company, of Duluth, have recently acquired extensive timber areas in the Alberni district. This company, which is one of the largest in the middle west, intend erecting a mill on the waters of the Alberni Canal. When completed it is expected the mill will have an output equal to any other on the Pacific coast.

Mr. John O'Brien, the well-known lumberman, was in Nanaimo recently looking over the harbor and adjacent points with a view to securing a site for a saw mill that he is anxious to erect here. If he can secure a suitable site on reasonable terms he will erect the mill at once. He represents parties who hold large timber limits on the island.

The Mayook Lumber Company, of Mayook, B.C., resumed cutting operations on April 2nd. During the winter's shut-down they had a new Berlin circular resaw added to their equipment, and generally overhauled the plant. They expect to average a cut of 35,000 feet per ten hours during the summer. The crop of logs taken out at their plant during the winter amounted to about five million feet all told, which consisted mostly of larch and fir.

The British Columbia Lumber & Shingle Manufacturers, Limited, is an organization lately incorporated under the laws of British Columbia to carry on the work of the old British Columbia Lumber & Shingle Manufacturers' Association. The president of the new organization is John Hendry; vice-presidents, H. DePencier and E. J. Palmer; secretary-treasurer, R. H. H. Alexander. The total cut of the coast lumber mills for the year 1906 has been compiled and is found to have been approximately 450,000,000 feet of lumber.

The new mill at Yahk, B.C., built by the King Lumber Company, of Cranbrook, B.C., started cutting on the first of May. This mill is equipped with a circular saw mill and a Wilkins gang saw, also the usual other machinery. The company's new mill at Cranbrook, which was built a year ago, has been running steadily all winter, lumber for this being sawn at the company's mill at Kingsville, which was in full operation all winter. Messrs. King have also purchased the output of the saw mills of Messrs. Leask & Company and Laurie-Foster Company at Cranbrook, all of which will be prepared for shipment at the company's planing mill at Cranbrook.

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RADICAL DEPARTURE IN LUMBER DRYING.

The following item appeared in "The Woodworker" for September, 1906: "A Grand Rapids, Mich., woodworking concern of unquestioned standing claims that because of a recent discovery, which for the present at least is a secret, it is enabled to dry twice as much lumber in an ordinary dry kiln as has been heretofore dried, and do it better. It is claimed for the new process that, instead of the lumber coming out hard and flinty, with a kink in the board at every knot, twists and checks in the ends of the board, solid oak inch lumber now comes out flat and straight, and as soft as ash, with every particle of tannic acid and moisture thoroughly extracted, and the stains and discolorations so prevalent by the old system entirely obliterated. This not only adds greatly to the value of the lumber by minimizing the waste, but adds much to the life of the knives, cutters and saws, and saves much time and expense in keeping the cutters in order. It is further stated that the concern referred to has been enabled to dispense with the services of several men in its cutting-up department and to throw out two of the three buzz planers used before. The method has been in use about a year and has attracted the attention of superintendents and managers of planing mills and furniture factories in other cities."

The concern alluded to in the first line of this article is the Grand Rapids Veneer Works, Grand Rapids, Mich., which are now quite extensively advertising their process. They say the statement that they make a kiln dry twice as much as formerly is a fact; further, it is claimed that in many cases this new process enables a kiln to dry as much as three times what it formerly did, and do it better. It is claimed for this new process that next to the point of time, the quality of the work is its best feature; that the drying is simply perfect—no checks, twists, kinks at knots, nor discolorations; that the stock is left so soft that the knots plane as smooth as if they were not in the board, thus enabling knotty stock to be used to good advantage instead of going to the furnace, and saving the bulk of the waste.

In a letter to the editor of "The Woodworker," Mr. Z. Clark Thwing, vice-president and manager of the Grand Rapids Veneer Works, says: "We actually dry 1 inch oak lumber, green from the saw, in ten days. In the above condition we dry ordinarily dried 4-4 oak in from six to seven days, and we dry it in such a manner that it does not shrink or swell. Now you will say this last statement is the limit. If you need any proof, I will send you samples of lumber dried by our process, with a test piece tacked to it, which you can remove and put in your desk, and soak the balance of the block and see for yourself. I think in view of the very radical claims we make that I had better do this, because our process is so revolutionary that an unsupported statement carries little weight. If you will have one of your representatives call on us we will demonstrate every statement to his satisfaction, and furnish him, if you wish, affidavits of every one connected with our concern as to what the kiln has done for us for the past year. We were about a year developing it in all its features, and then ran it for a year before attempting to push it, to make sure we had every feature right, and the result is that we have a process that to us is the most valuable discovery we have ever made since we have been in business, one that is saving us more money in proportion to its cost than any proposition in our business, our kiln saving us on the cull lumber that we are using for centres last year over $3,000 of waste that formerly went into the furnaces, and we counted this lumber worth only $10.00 per thousand. At this estimate, if we were to charge it at its market value, the saving would amount in dollars to proportionately more. The same labor that cut the lumber previously cut twice as much last year, and we used $2.340.00 worth of labor less, due to the ease with which the lumber cuts and the lack of buzzing and ripping that we formerly had to go through.

"Our theory to account for the lumber not shrinking or swelling is that we absorb the sap cells and leave in their places crystallized albumen, which in crystal form has no power to absorb moisture and hence swell. If you will examine the samples I will send you, under a strong miscroscope, you will see the capillaries of the wood are full of these crystals. Hold the samples in the sunlight and look at them through a microscope, and they are plainly visible. We think it is the sap dried up in the wood that shrinks and swells wood. If these cells are destroyed their power of absorption of moisture is gone, and while we do not disturb the essential oils of the wood or any of the fibre a particle—in fact, our being able to dry lumber green from the saw and leave it as strong as before drying, is a positive proof of this—we do extract the tannic acid and lime which produce the slow combustion called decay, hence air drying of lumber is decay. Take wagon stock, for instance. Large manufacturers are carrying their stock three and four years, and not one of them will claim that the wood is as strong when used as it was when the stock was placed on the yard, but they have to do it in order to get it in a condition that they can use it. In other words, they put the lumber through a slow process of decay in order to destroy the shrinking and swelling properties, in order to keep it in work when used and make it hold glue and paint. If this process is done artificially in a few days, the strength and life of the timber is left and the process of decay is arrested. We put our kilns in on a positive guarantee to do the business or no pay. We know what we are doing, know that we can do it for others, and we make our contract accordingly—they run no risk. If we do not deliver the goods we do not ask for their money."

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TRADE NOTES.

The Robb Engineering Company, of Amherst, N.S., have purchased two Standard duplex pumps from the Smart-Turner Machine Company, Hamilton, Ont.

Mr. E. Mawhinney, of Eburne, has purchased two "Simplex" shingle machines and other necessary running gear from Messrs. Letson & Burpee, of Vancouver.

The Clowholm Falls Lumber Company, of Clowholm Falls, via Sechelt, B.C., have ordered a couple of "Simplex" shingle machines and other machinery from the Letson-Burpee Company, of Vancouver.

The Ideal Oak Leather Company, Limited, has been granted an Ontario charter, with a capital of $50,000 and head office in Toronto. The provisional directors are Messrs. H. R. Pearce, Arthur Gate, W. H. Smith, R. E. Holliday and George Kerwin, all of Toronto.

The Lumber Insurance Company of New York, having its main Canadian office at Ottawa, Mr. Edgar D. Hardy, Canadian manager, has recently registered in Nova Scotia. Mr. J. G. Rainnie has been appointed general agent for the Maritime Provinces. Mr. Rainnie is well known in this section and is actively engaged in presenting the company's proposition to the various lumbermen in this section. The Lumber Insurance Company of New York is the only lumber specializing insurance company regularly licensed in the Dominion.

The Stearns Company, of Erie, Pa., announce that owing to the great increase in their saw mill and locomotive business they have decided to separate the two. Hereafter the manufacture of saw mill machinery will be conducted entirely by the Stearns Company, for which a large new plant has been secured, while the construction of the "Heisler" geared locomotives will be carried on by the Heisler Locomotive Works. It is important that all correspondence pertaining to Heisler engines should be addressed to the Heisler Locomotive Works, or to their western representatives, the Whitney Engineering Company, Tacoma, Wash. The Heisler locomotive is represented in British Columbia by Geo. A. Walkem & Company, Vancouver.

The Standard Lumber Company, who have been operating a mill at Fort Steele Junction near Cranbrook, B.C., expect to build a new mill this summer at St. Joseph's Creek, which is situated about two miles east of Cranbrook. The machinery for this mill has already been ordered from the Waterous Engine Works Company, and consists of a circular saw mill, a five-saw edger, with the usual live rolls, steam carriage feed, etc. The power plant will consist of two boilers 60 inches by 14 feet, and two engines, one 16 inches by 18 inches, and other other 12 inches by 14 inches. A Waterous lath mill will also be installed. In addition to this a planing mill will also be constructed. It is expected that the new plant will be in operation by next fall.

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Filing and Hammering Contract

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One circular automatic **BOX-BOARD MACHINE** with 9 foot carriage. Saws take only 1/8" kerf. Price $525.00 including 6 saws, 3 of same 42" with collars. Great trade. Can be seen now in operation.

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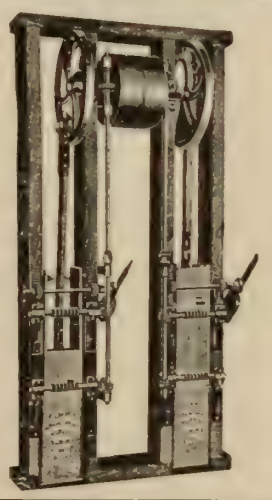

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PUBLICATIONS.

O. J. Schell, of Alexandria, Ont., has recently issued a series of bulletins describing his improved saw guide, saw mill machinery and specialties.

A catalogue devoted to Lidgerwood hoisting engines has been issued by Allis-Chalmers-Bullock, Limited, Montreal, Canadian agents for these well-known engines.

The stencil or hammer marks placed by shippers on the ends of deals, battens and boards exported to foreign countries, indicate the various qualities into which the goods are sorted. This year the Swedish shippers have assimilated the marks for the English market with those hitherto in use for the continent only. In the new edition of the "Timber Trades Journal List of Shipping Marks," just to hand, full particulars of the new Swedish designations are given, and every department of the book has been brought up to date. We also notice that the list of agents for various stocks and the recent changes in the shipping marks are duly recorded. This useful volume, of which many editions have been published in the course of the last half century, has become an indispensable book of reference to timber merchants and all large buyers of wood. The maps and charts add materially to the usefulness of the book. It is published at 7s. 6d. by William Rider & Son, Limited, 164 Aldersgate St., London, E.C.

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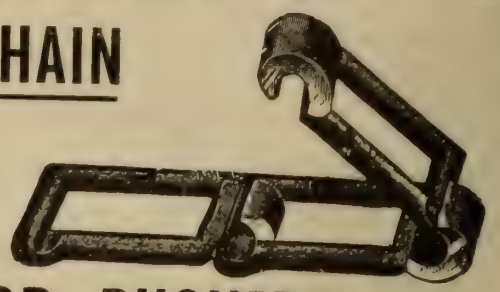

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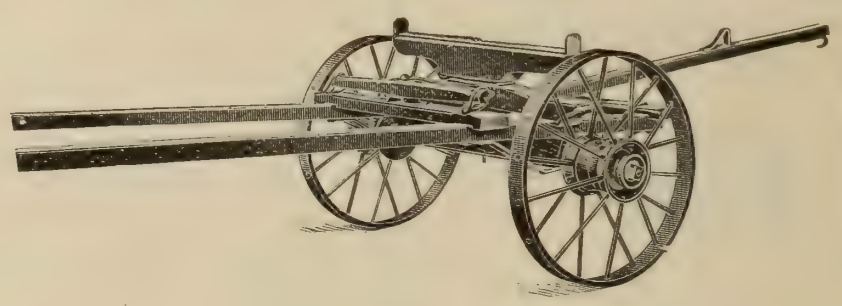

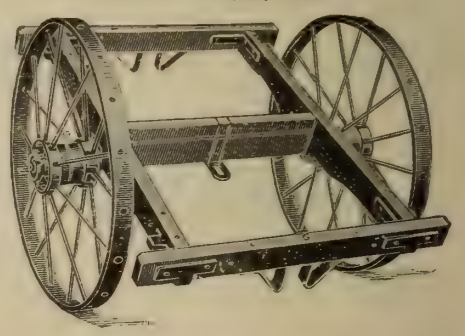

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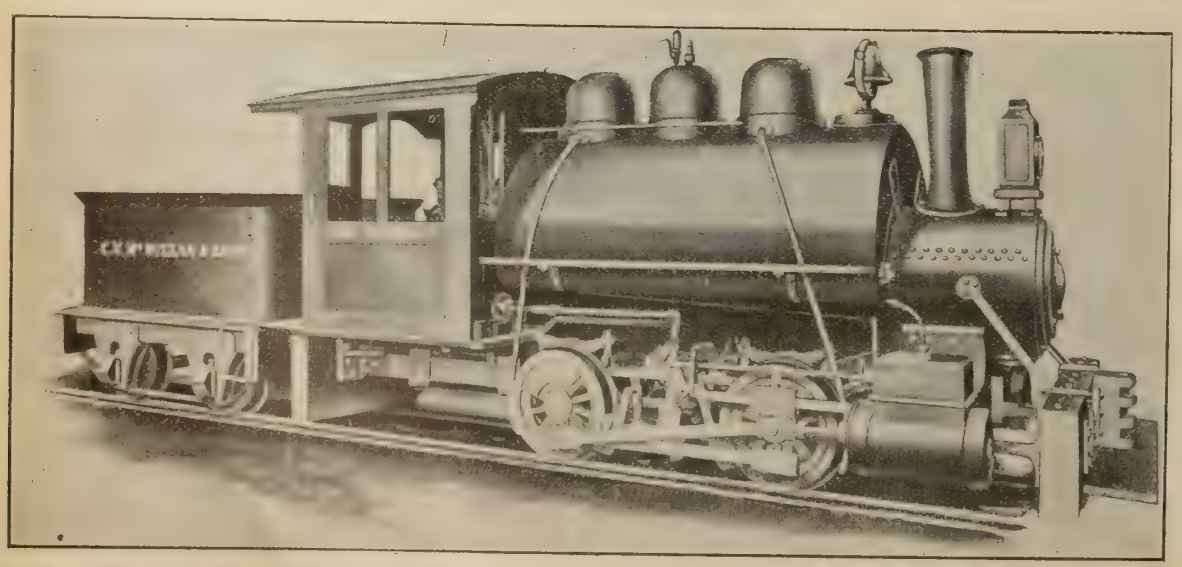

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TESTS OF FIRE KILLED TIMBER.

Tests of fire-killed timber have recently been made at the timber-testing laboratory of the United States Forest Service at the University of Washington (Seattle). Green and fire-killed white fire (Abies concolor) from New Mexico were tested. According to a circular issued on April 1st by the United States Forest Service, the results indicated that the killing of the timber by fire is not in itself injurious, and that sound fire-killed timber should simply be considered thoroughly seasoned timber, so far as its use is concerned. Fire-killed timber checks badly, however, when left in the tree, and this is an obstacle in the way of utilizing it for some purposes. For the manufacture of lumber it should be used, if possible, within a year after it is killed, but satisfactory railroad ties have been made from timber killed fifty years previously.

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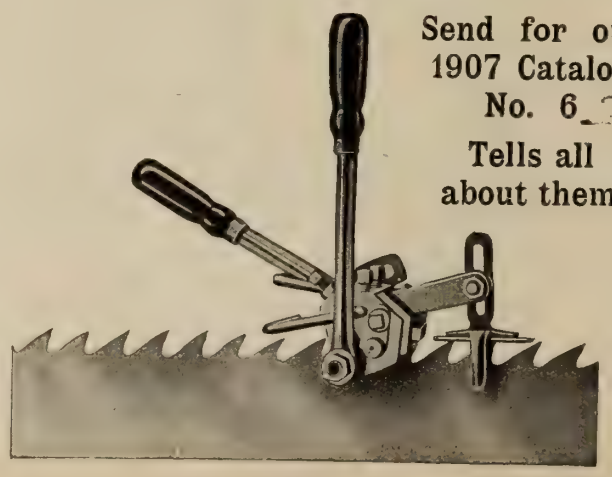

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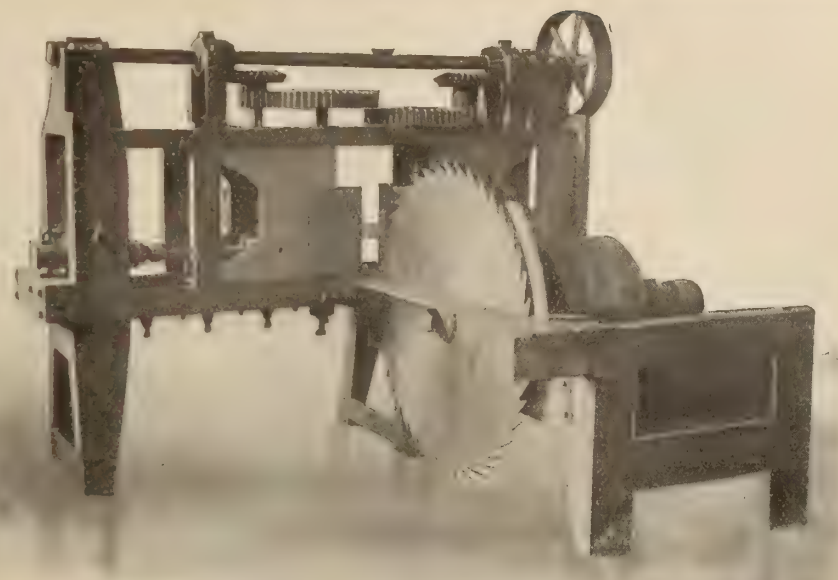

As can be seen by the engraving, the frame is cast in one piece. The legs of cast iron are cast in one piece with the saw bench. This makes an extremely substantial machine

The feed rolls 12" diameter are driven by cut gears 16" in diameter. The proportions of the gears are such as to give a powerful driving mechanism.

The arrangement to set the stationary roll (not shown in the cut) is very accurate, quick and reliable. The clear distance between the slides is 10."

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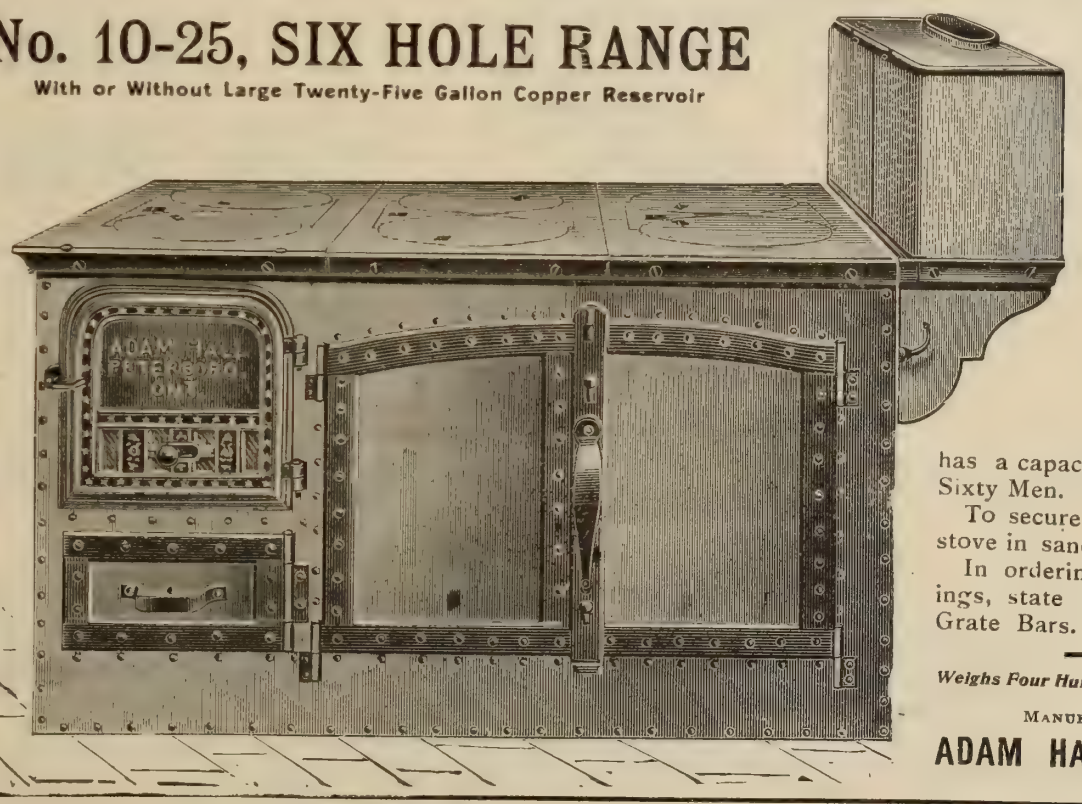

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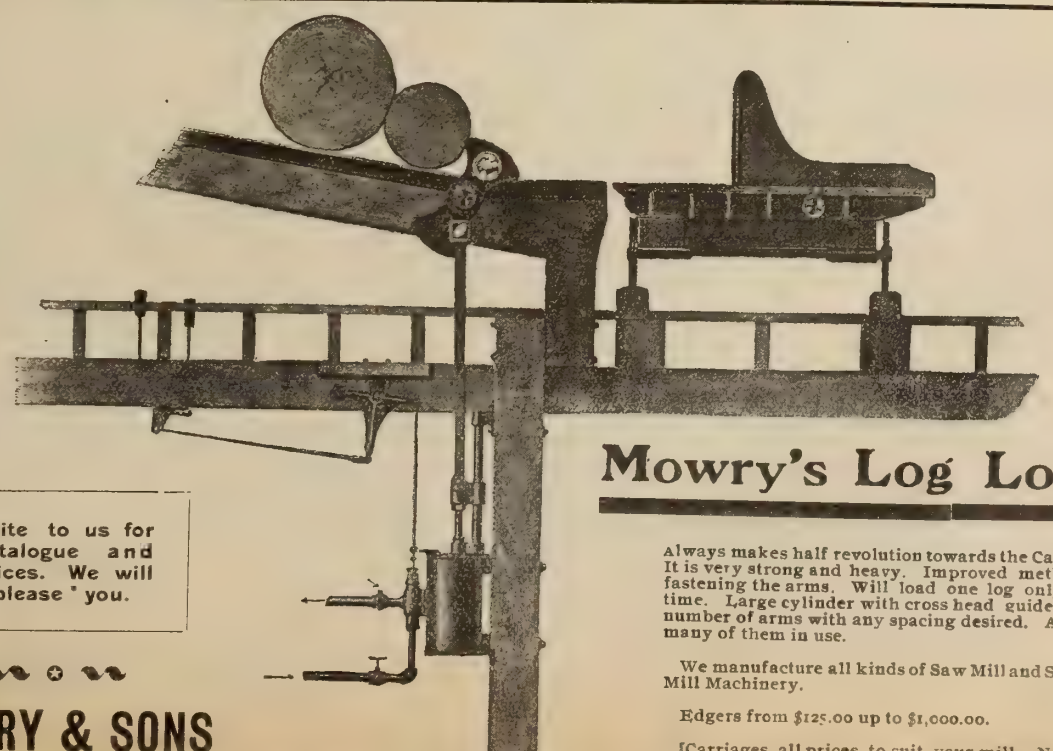

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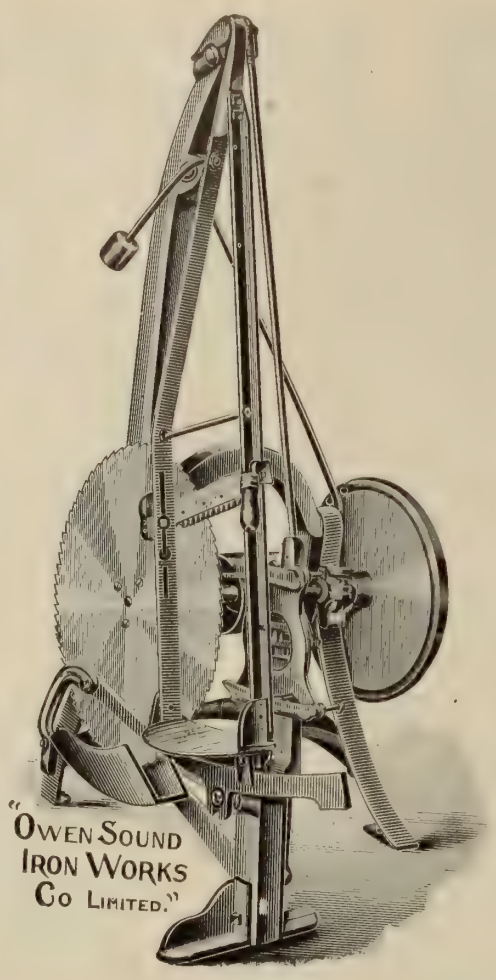

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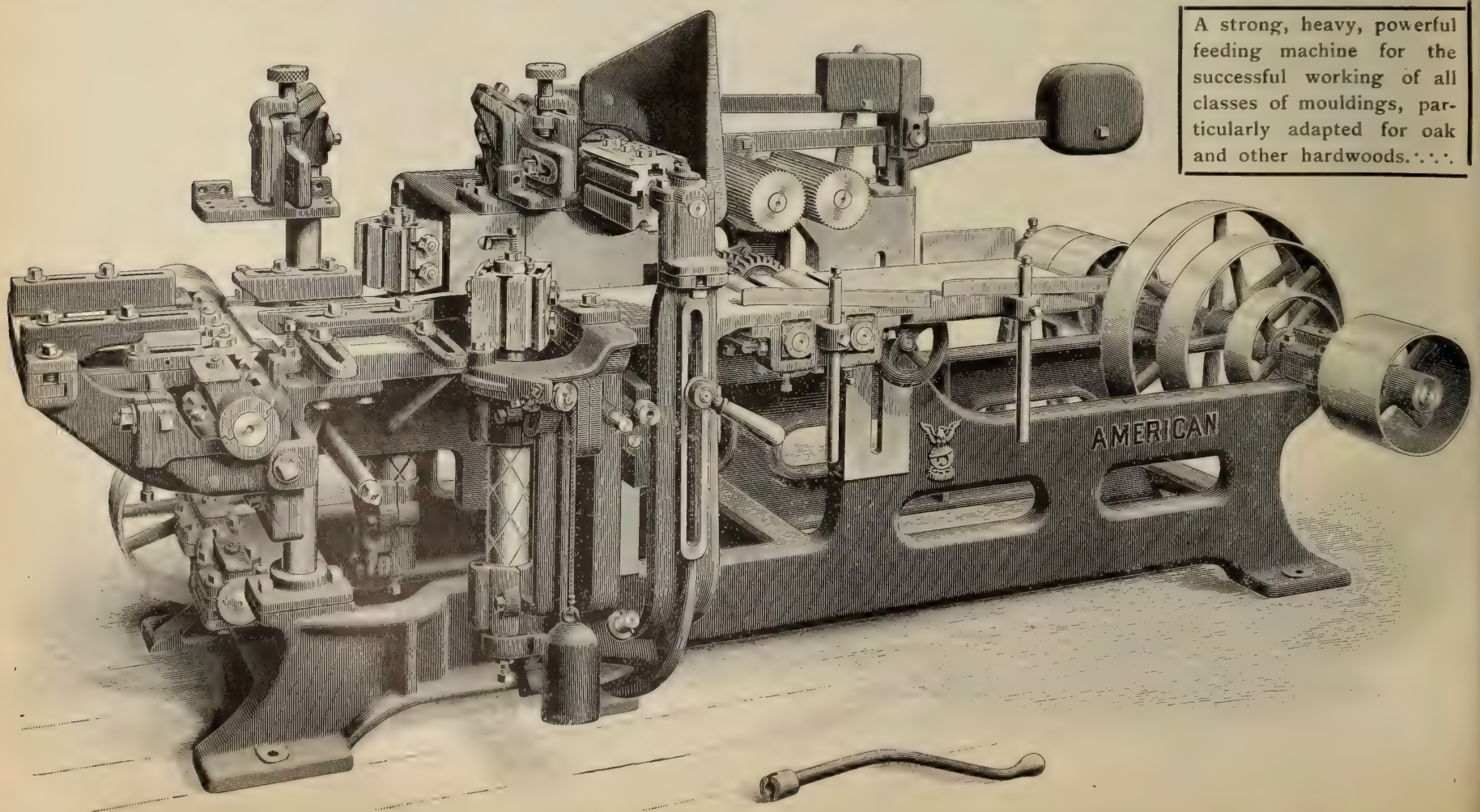

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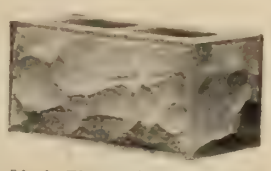

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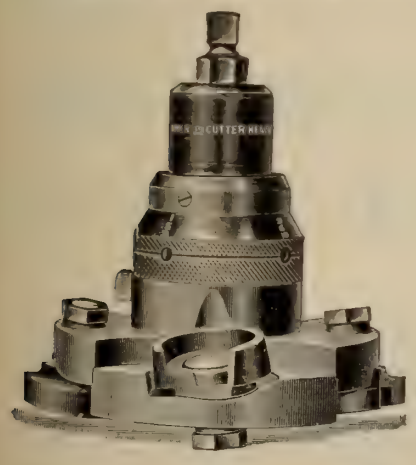

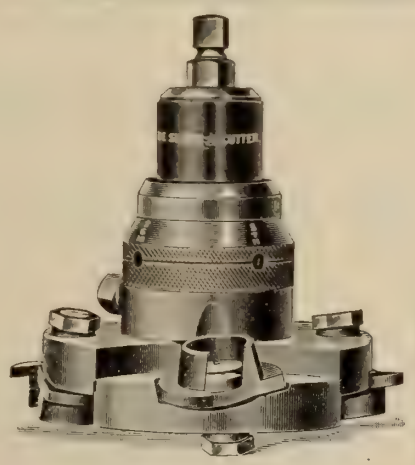

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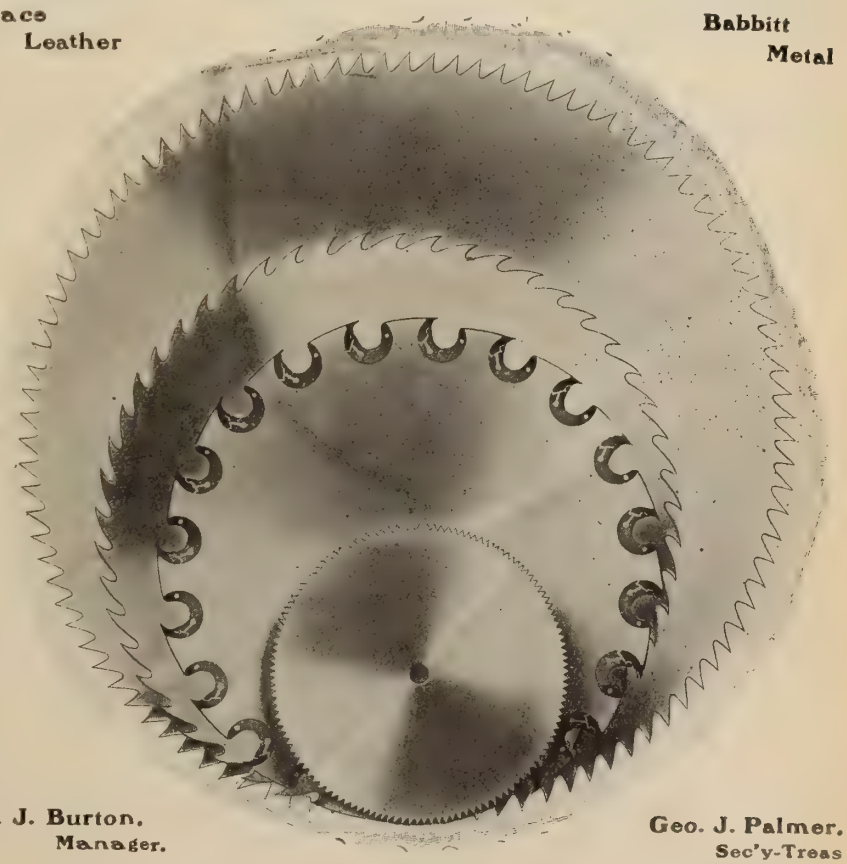

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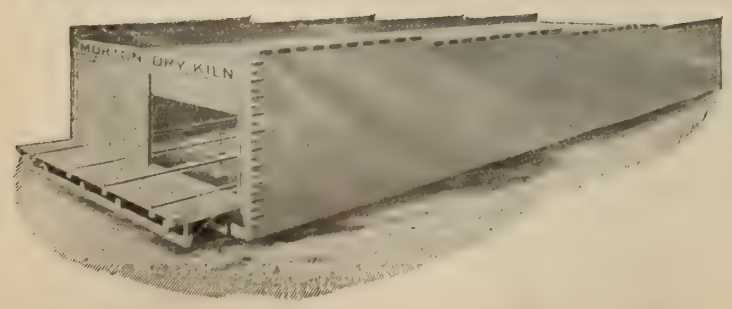

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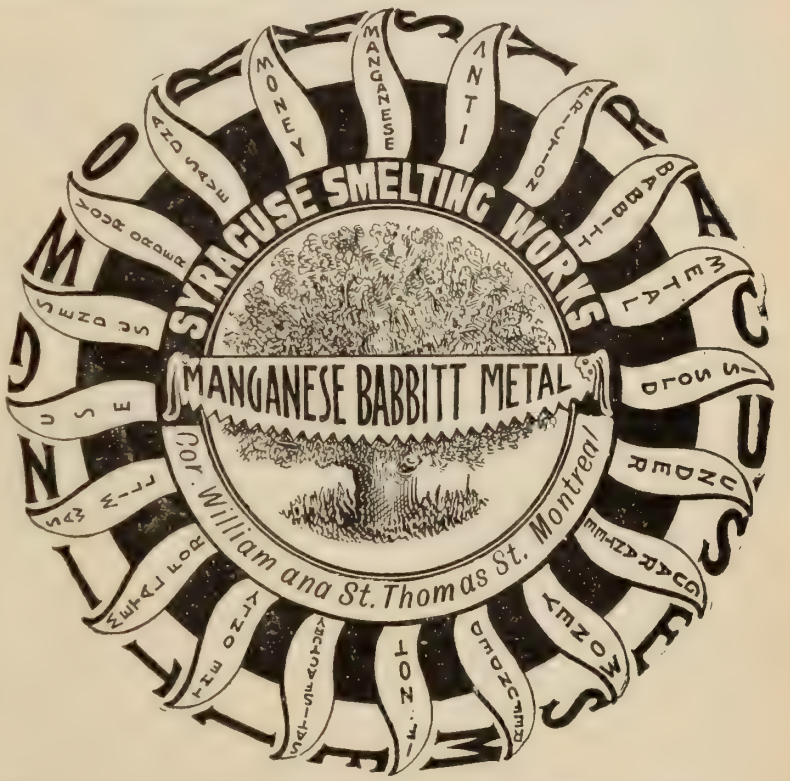

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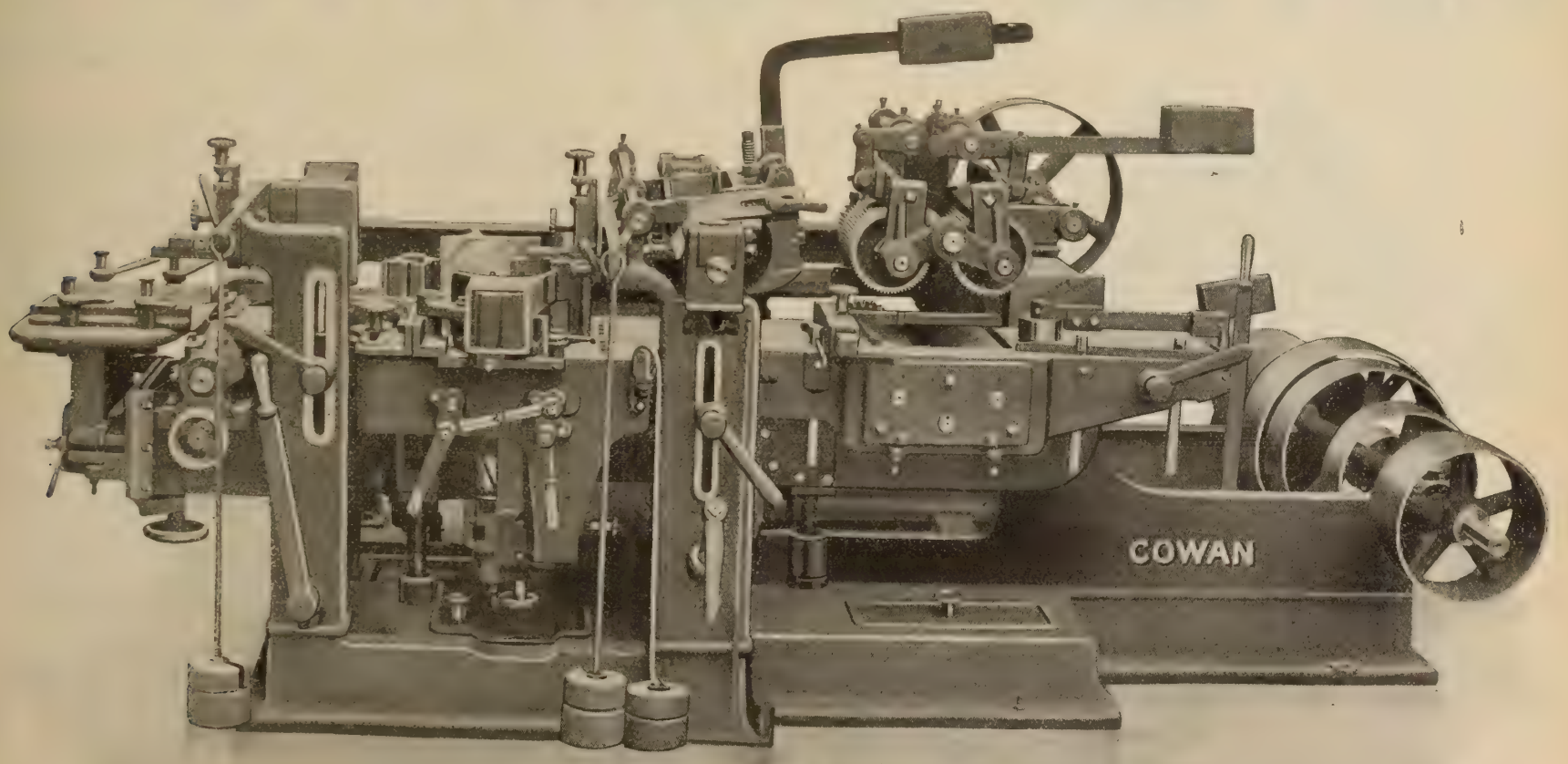

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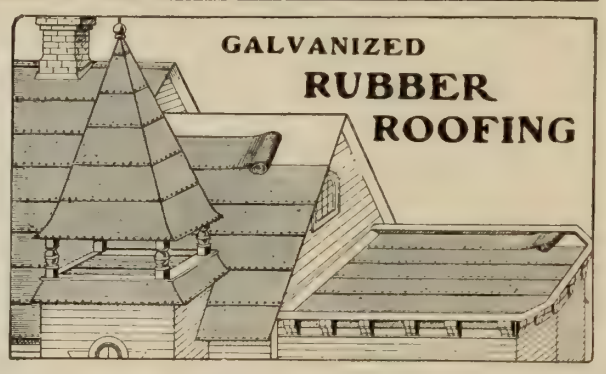

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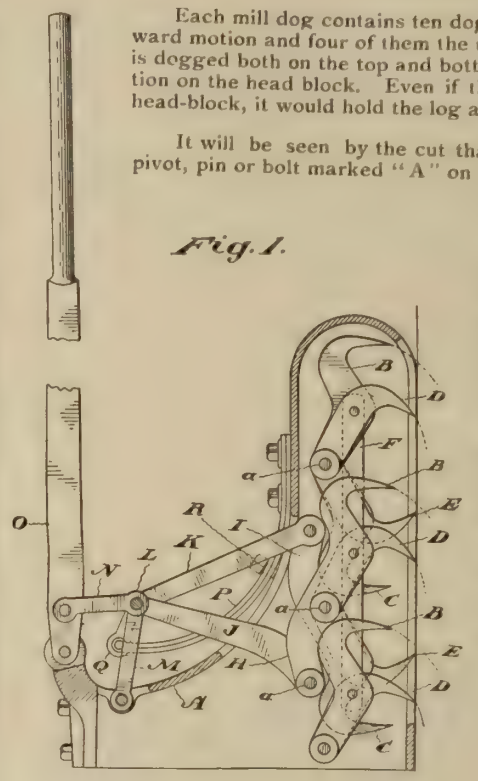
Each mill dog contains ten dogs; six of the dogs have thedown-forward motion and four of them the upward motion, so that the log or cant is dogged both on the top and bottom, preventing it from turning its position on the head block. Even if the log were dogged, not touching the head-block, it would hold the log as well.

It will be seen by the cut that these ten dogs are fastened on the pivot, pin or bolt marked "A" on the cut, and connected with link bars from the principal dog to the lever "O," which operates all the dogs.

Fig. 1.



There are five of the dogs which project more than the others, about two inches from the head block, and called the log dogs; and five which project about 5/8 inch from the head-block, and called the board dogs; but when dogging a board or a plank or a stock, all the dogs come evenly out of the head block, about 5/8 inch, so that in dogging a board or a stock, both the log dogs and board dogs grip it, providing that the stock or board is wide enough to take all the dogs.

This patent mill dog will dog perfectly safe in all classes of timber, be it pine, hemlock or hardwood of any description, and besides it does not tear the board or stock.

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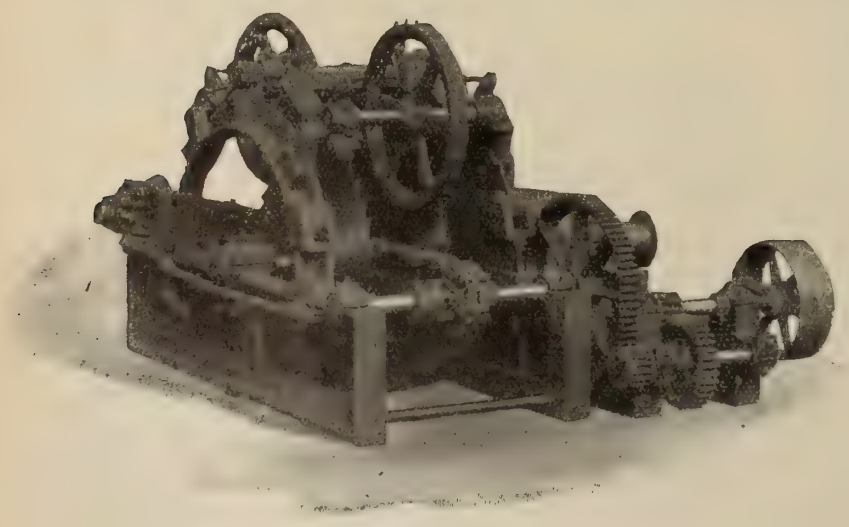

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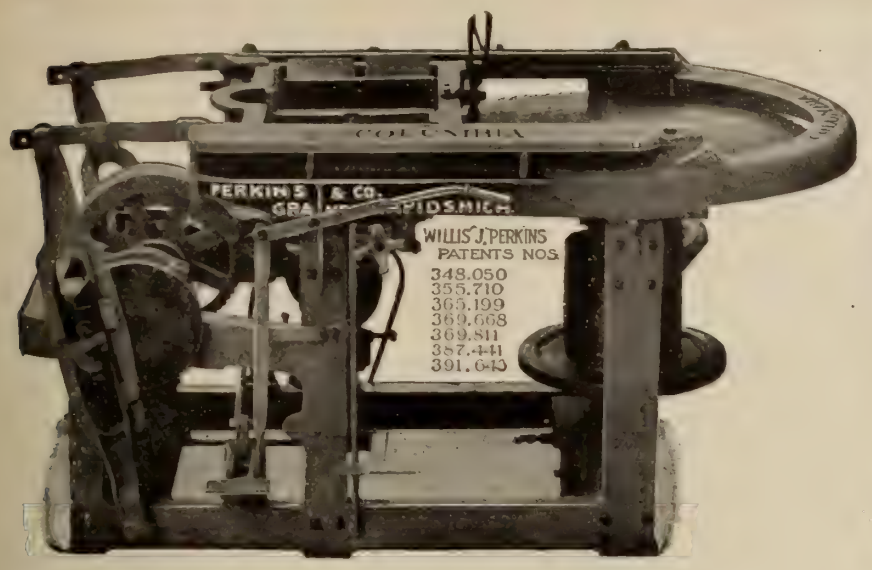

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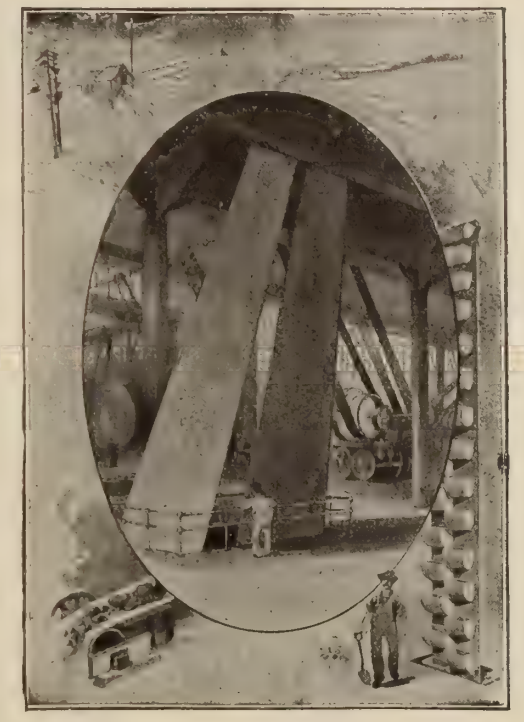

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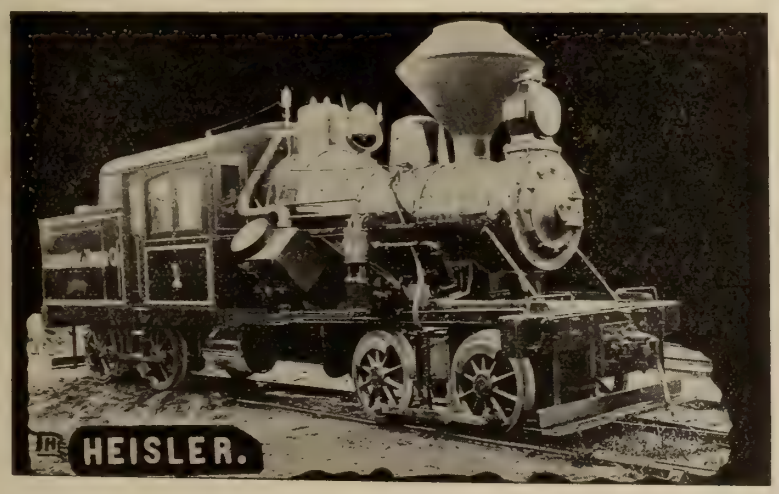

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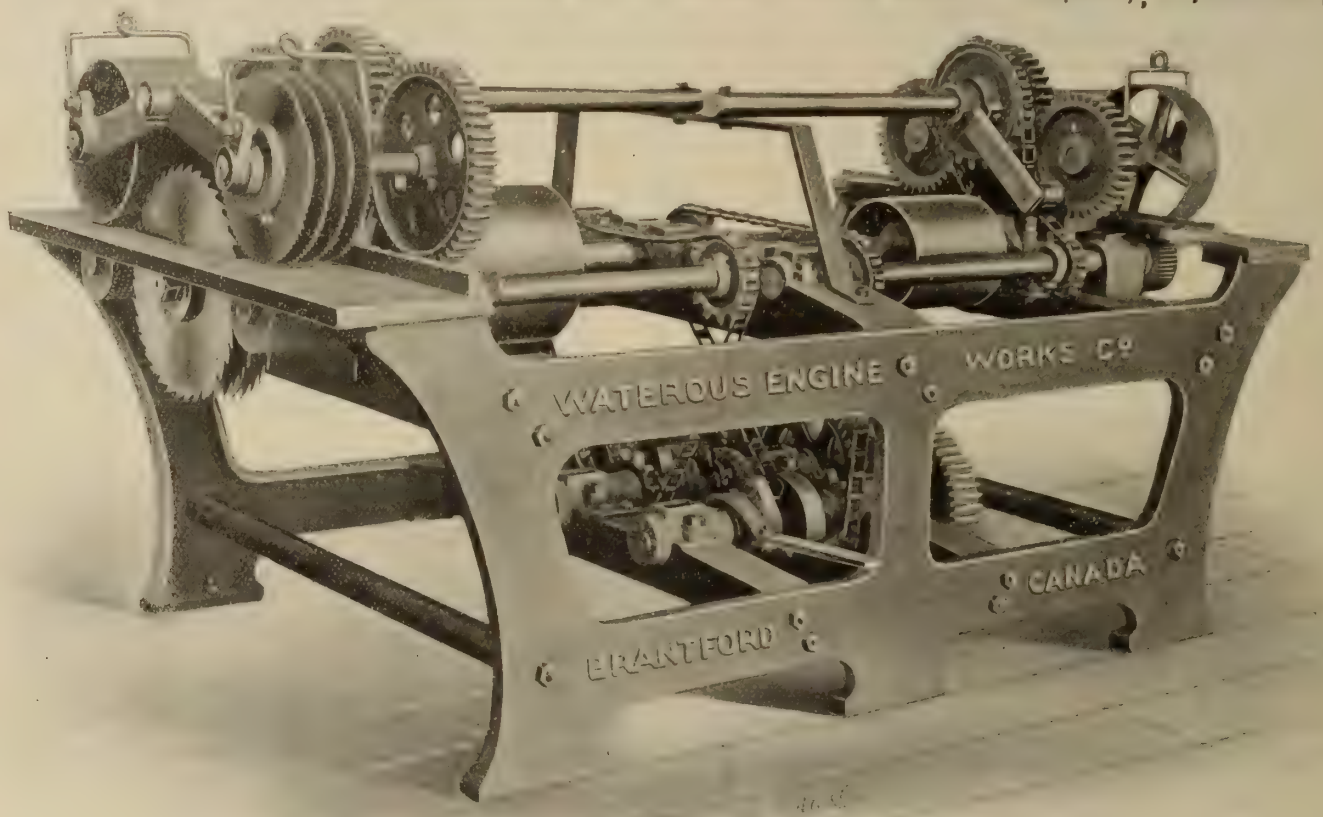
The Waterous Heavy Improved Combined Lath Mill and Bolter

With Independent and Adjustable Feed. All Rolls Upper and Lower Power Driven.

Two idler pulleys supplied, enabling lath saws to run reverse to bolter saws. Capacity, 50,000 lath per day.



Independent Lath Mill

With Independent Feed

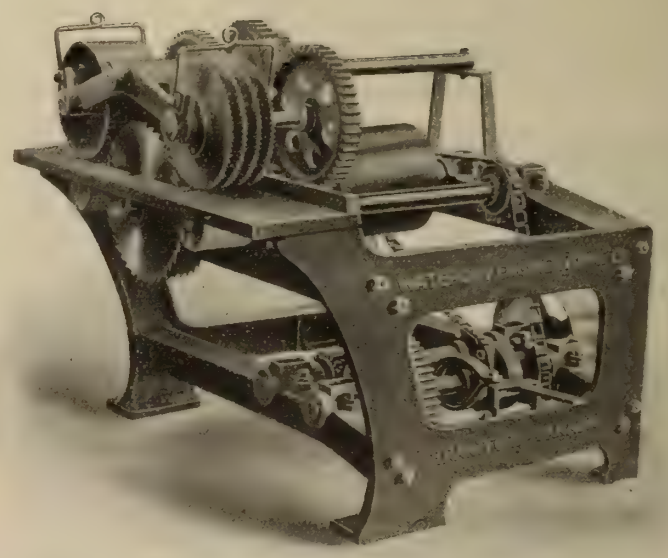
This feed can be started or stopped at will of operator as it is driven from counter shaft and not from mandrel.

The Bolter

is an exactly similar machine.

We also make a

Lath Buncher and Trimmer



Send for bulletin giving descriptions of these machines.

Waterous Engine Works Co., BRANTFORD, Canada.

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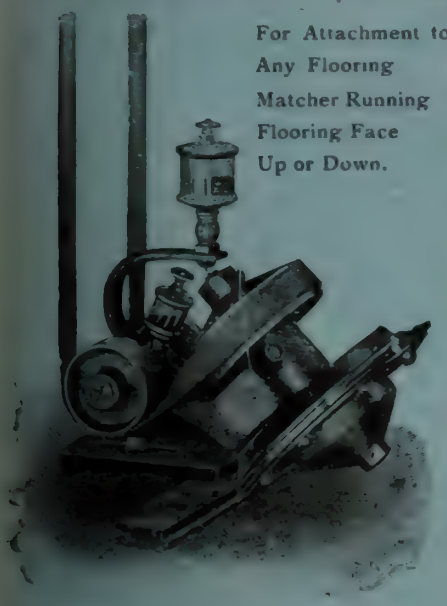
SHERMAN FLOOR BORING MACHINES



For Attachment to Any Flooring Matcher Running Flooring Face Up or Down.

Above cut shows machine boring flooring run face up. Our boring machines have been on the market for the past ten years and are well known to be the best machines on the market for their purpose. Since fast-feed matchers have come into use, it may be said that they are the only boring machines that can be used as an attachment. They require no floor space and there is no extra cost for handling.

We make the

SHERMAN FACE BORING MACHINE
for attachment to any flooring machine, to bore jointed flooring

We make also the

SHERMAN END MATCHING MACHINE
for end matching flooring

Write for Circular.

W. S. Sherman Co.
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Reliable Veterinary Remedies

No logging outfit is complete without a supply of reliable veterinary remedies. Getting the wrong kind means the loss of the use of your horses when time is valuable.

Johnson's Veterinary Remedies

are guaranteed never to fail when used as directed. You get your money back if they ever do.

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Johnson's Horse Liniment No. 1.
A penetrating Alcoholic Liniment. Put up in one gallon jugs, with full directions, per imperial gal. $4.50

Johnson's Horse Liniment No. 2.
A combination of the best oils used as liniments, imp. gallon . $3.00

Johnson's Horse Colic Remedy.
A sure and speedy cure for colic Imperial gallon $5.00

Johnson's Veterinary Healing Ointment.
Positively the best all-round healing ointment made. In use by the largest owners of horse flesh in Canada. Put up in 2 lb tins, each . . $2.25
or in ¼ lb tins, per dozen . . $3.50

Johnson's Condition Powders. (Concentrated).
Put up in bulk, per lb . . . . 30c.

These goods being put up in bulk are more economical than others, as cost of bottling, etc., is saved.

CAMP REMEDIES.

In addition to our Veterinary Remedies we make a line of medicines for lumbermen, including a strong, penetrating liniment, healing ointment, cholera cure, liver pills, cough syrup, in fact anything in the form of Camp Drug Supplies. We know that there are no better remedies made than those we offer. There may be others nearly as good, but they lack our guarantee. Satisfaction or money back. A trade discount of 10% allowed off all orders amounting to $100.

Send postal for printed matter.

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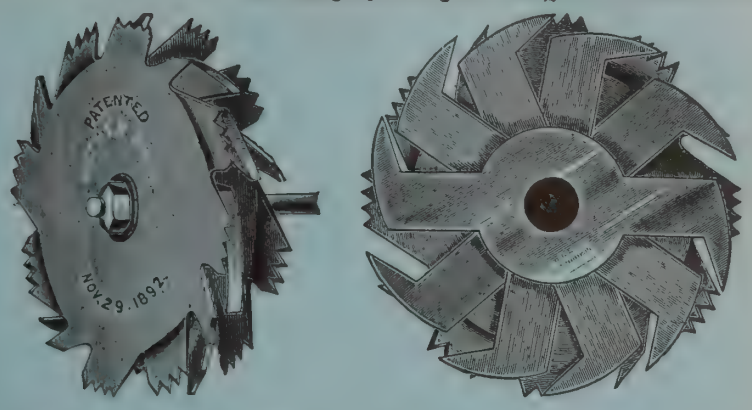
For cutting any width groove from ¼-inch to 2 inches or over



Can be used on any Circular Saw Mandrel. Will cut a perfect groove with or across the grain

This is the only Dado Head on the market that gives entire satisfaction on all classes of work No screw adjustment. For different width grooves, simply remove or add inside cutters. Sold by builders and dealers of woodworking machinery in all parts of the United States. Will send on approval, in competition with any other make on the market; if not the best return at our expense.

HUTHER BROS. SAW MFG CO., Inc., 229-231 Mill Street, ROCHESTER, N. Y., manufacturers of Circular Saws, Morgan Pattern Lock-Corner Box Cutters, Concave Saws, etc.

Long Clear Bacon

ALL AVERAGES

Extra Short Clears

Buy Now—from Us—and you will Buy Right.

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SHAY ROD

INCREASED OUTPUT is an assured thing, when a **SHAY GEARED LOCOMOTIVE** is included in your logging paraphernalia.
They will perform more work, with less cost for maintenance, than any other Geared Locomotive on the market. No center shaft to limit depth of firebox.
More cast steel in its make up than any other geared locomotive, hence our assertion that IT WILL OUTLAST ANY GEARED LOCOMOTIVE YET BUILT.
Catalog No. 14T free to intending purchasers.

THE LIMA LOCOMOTIVE AND MACHINE COMPANY
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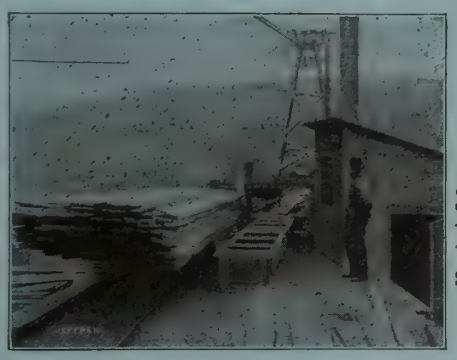
Wire Rope Conveyer

OF

Jeffrey Construction

FOR

Lumber



Slab, Saw Dust, Refuse, Log Lumber, Offal, Conveyers shown in Saw Mill Catalog 57 B.

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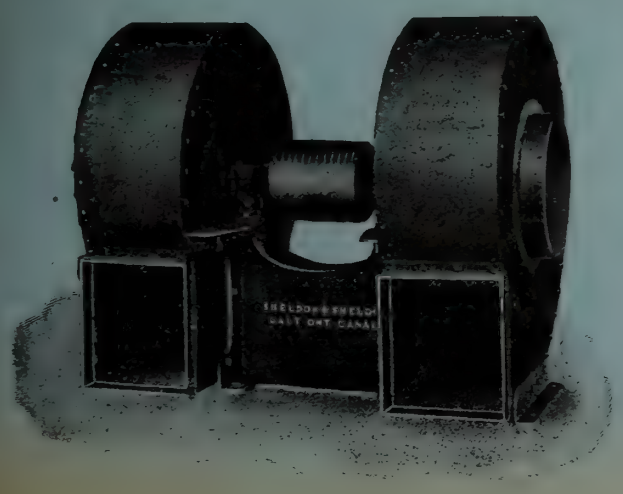

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Piping—Furnace Feeders
Cyclone Dust Collctors
Systems Installed Complete

Natural Drift and Blower Dry Kiln Apparatus

Trucks, Cars, Etc.
Hot Blast Heating Systems

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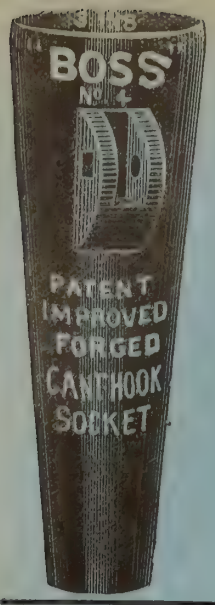

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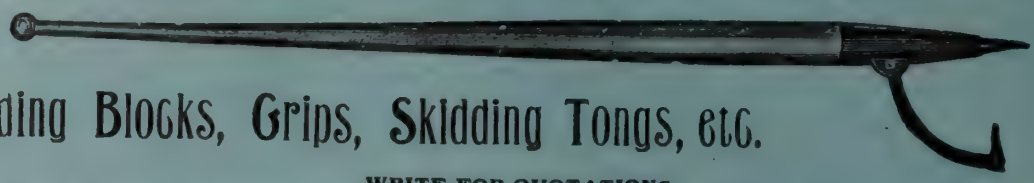
On our "BOSS" PEAVEYS and CANT HOOKS we use only FORGED STEEL SOCKETS. They are the LIGHTEST and STRONGEST on the MARKET. They are all fitted with air dried SPLIT ROCK MAPLE HANDLES, and shipped to every lumbering point in CANADA.



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TO MILL MEN

SOMETHING NEW

You will find that by using

FREEZE'S PATENT BELT LAYING TOOLS

you will save more than half the time usually lost in lacing belts. Consider—

How much do you lose every year by reason of machinery standing idle while belts are being laced.

You can stop over half of that leak by using the above named tools for running leather laces into belts. They will be sent to any address in Canada by mail on receipt of price with order, and with ordinary care they will last a life-time. *Price 50 Cents Each.*

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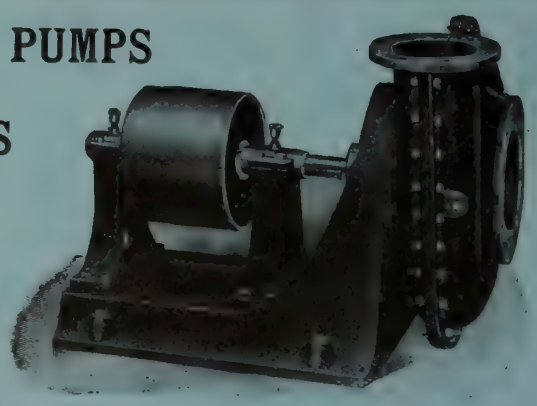

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THE J. C. McLAREN BELTING CO. OAK EXTRA TANNED EST 1856

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MACHINE KNIVES OF EVERY DESCRIPTION FOR **Woodworking Machines**

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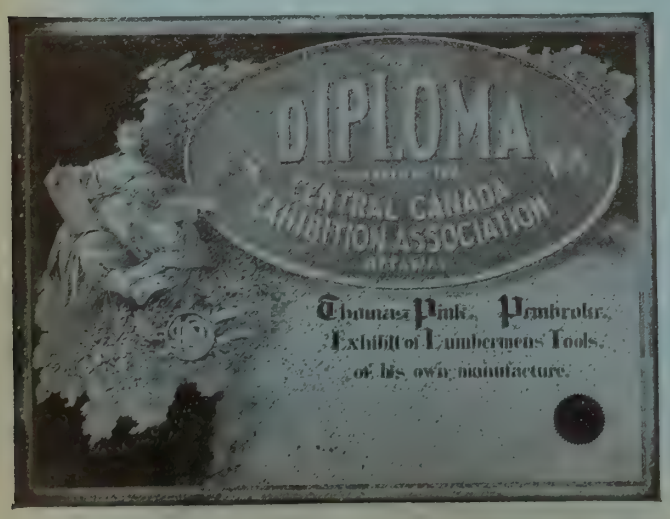
The Peter Hay Knife Co., Limited - Galt, Ont



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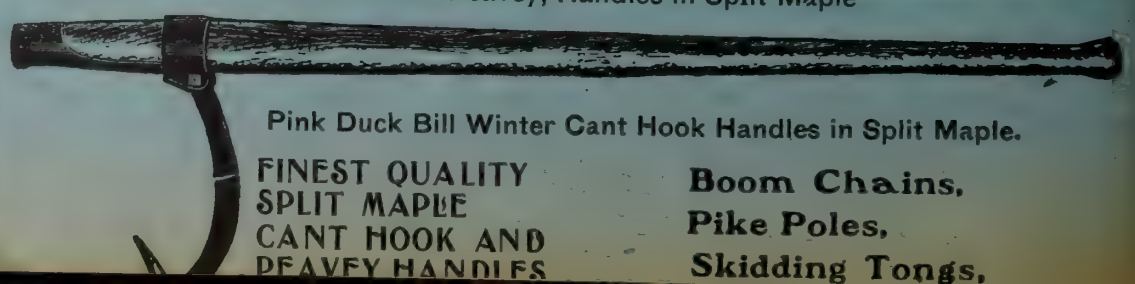
PINK LUMBERING TOOLS

The Standard Tools

In Every Province of the Dominion, New Zealand, Australia, Etc.

Pink Round Bill Peavey, Handles in Split Maple



Pink Duck Bill Winter Cant Hook Handles in Split Maple.

FINEST QUALITY SPLIT MAPLE CANT HOOK AND PEAVEY HANDLES

Boom Chains,
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CANADA LUMBERMAN
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REACHES REGULARLY MANUFACTURERS, BUYERS AND SELLERS OF TIMBER PRODUCTS IN EVERY PART OF CANADA AND LEADING IMPORTERS ABROAD

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NORTH COAST DRY KILN CO.
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We
Have been in the same business 50 years,
Know
a thing or two about same, and as experts declare
There is no better Babbitt than
FLEUR DE LIS
ANTI-FRICTION METAL

FOR SAW MILLS
PROVE IT!
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Which is Wisest?

Some people buy Belting on price, others on quality. Which is wisest?

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WE GUARANTEE

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The largest manufacturers in Canada of Lumbermen's Tents, Surveyors' Tents, Contractors' Tents, Camping Tents and every description of Lumbermen's and Contractors' supplies; also Flags, Awnings, Waterproof Goods, Oiled and Rubber Clothing, Horse and Wagon Covers, Canoes, Row Boats, Paddles and Oars. Note the address
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Never is affected by wetness, and does not stretch
Excels in Transmission Power
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AMPHIBIA

WATERPROOF LEATHER BELTING
For the WET PLACES in the SAWMILL

Let us Send You Samples and Prices

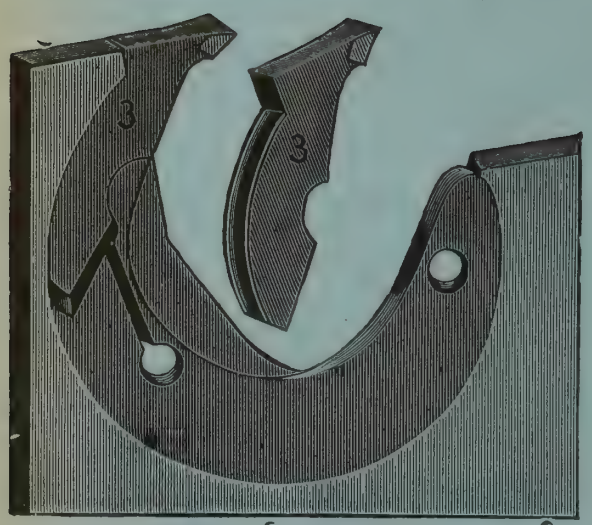
SADLER & HAWORTH MONTREAL and TORONTO

R. H. SMITH CO., LIMITED

St. Catharines, Ont.

We are the Sole Manufacturers of Saws under the **Simond's Process** in the Dominion of Canada.

There is no process its equal for tempering circular saws. Other makers recognize this fact, as some of them, in order to sell their goods, claim to have the same process. **All such Claims are FALSE,** as the patentee in the U. S. and ourselves are the only firms in the world who use it.



INSERTED TOOTH SAWS

Notice the improved shank. We call particular attention to the swell which strengthens it at the weakest part and which gives it more wear than the old style.

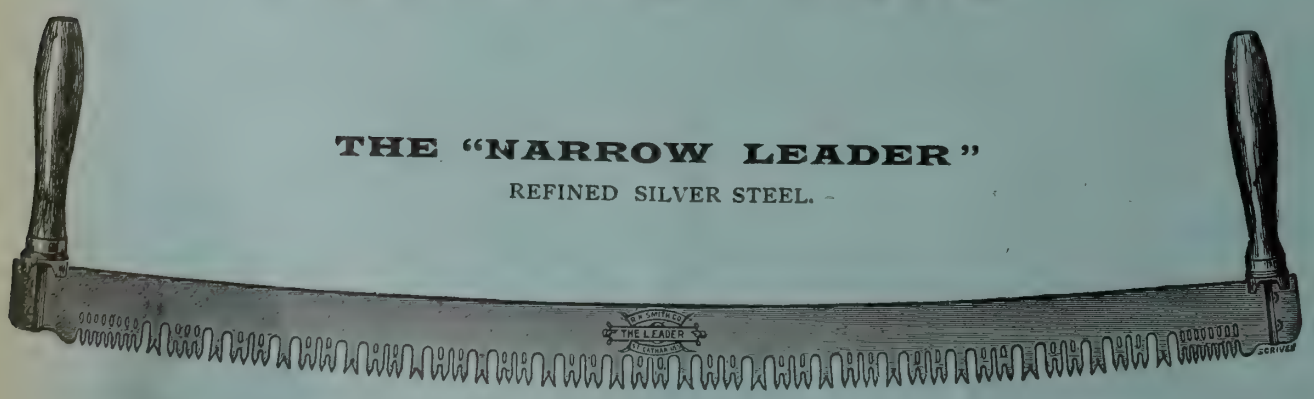
Shanks made in usual gauges and to fit your saws perfectly.

SHINGLE SAWS

The quality of the "Simonds" Shingle Saws is proven by the fact that the largest shingle and machine manufacturers in Canada are using them.

Run a "Simonds" and you will increase your output.

CROSS-CUT SAWS



The Simonds temper and style of tooth make the "Leader" the fastest and easiest cutting saw manufactured.

Write for prices.

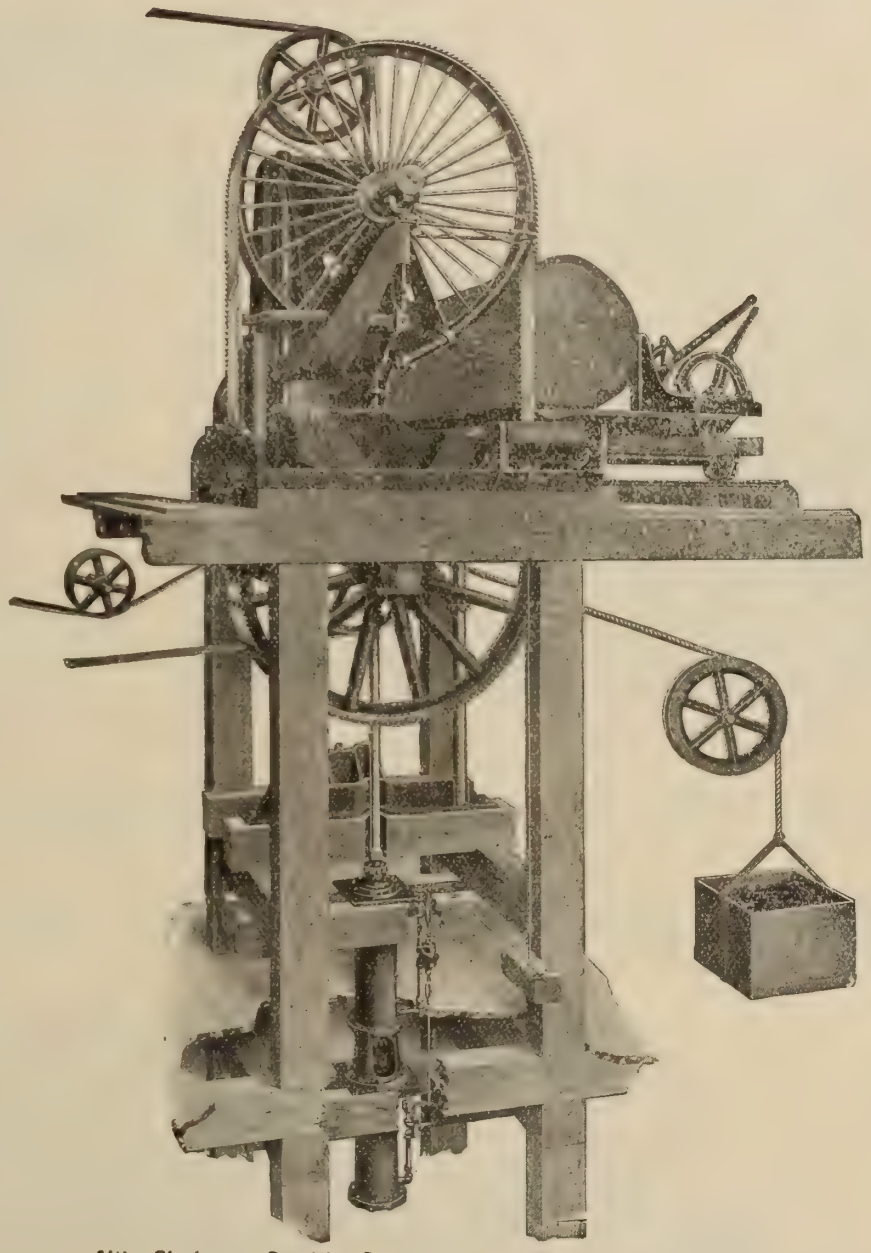
R. H. SMITH CO., Limited St. Catharines, Ont.

THE BAND MILL RECORD!

THE claim for a day's cut of ten hours from a double cutting band mill has been placed at an average of 7,500 feet per hour, but an Allis-Chalmers double band mill, installed in a mill of the El Dorado Lumber Company, of San Francisco, on the 27th of February, made a cutting of 8,620 feet per hour, or 86,205 feet per day of ten hours. This machine is a 14 inch double cut Allis band mill, and has been in use since the previous spring.

On the same day a single Allis band mill cut 73,964 feet, making a total of 160,169 feet for the day's run.

The record for the 27th, although remarkable, was somewhat bettered by the cutting made in the same mill with the same machines on the 28th, the day following. The single band mill cut 79,203 feet, and the double cutter 84,219 feet, both in ten hours, making a total of 163,422 feet for the day's run. The figures show that the cut of February 27th was not an extraordinary run for this mill.



Allis-Chalmers Double Cutting Band Mill in raised position for large log. See Bulletin 1700.

Allis-Chalmers-Bullock

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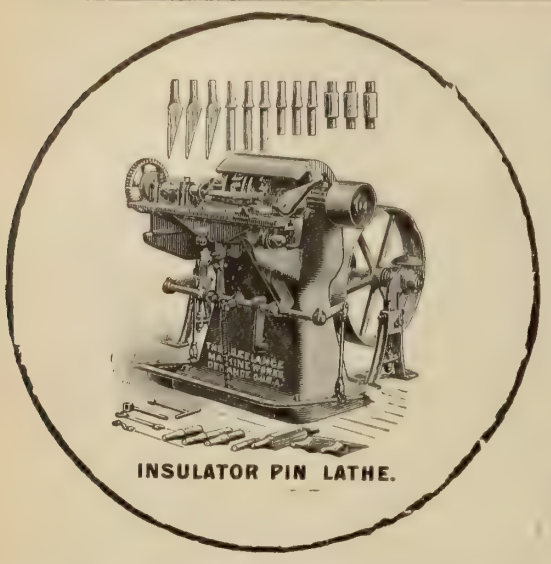
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Wood--Working Machinery

For Manufacturing

HUBS, SPOKES, WHEELS, WAGONS, CARRIAGES, RIMS, SHAFTS, POLES, NECK-YOKES, SINGLETREES, BARREL HOOPS.

Handles of Every Kind, Insulated Pins, Spools, Bobbins, Oval Wood Dishes, and General Wood-Work.

Invented and Built by

THE DEFIANCE MACHINE WORKS,
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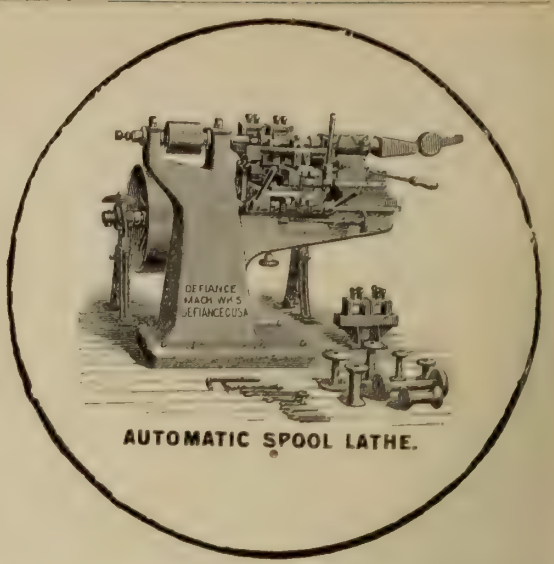
AUTOMATIC SPOOL LATHE.

The "Alligator" Steam Warping Tug

SIDE WHEELS OR TWIN SCREWS

The Twin Screws are arranged with flexible joint to raise up in crossing portage

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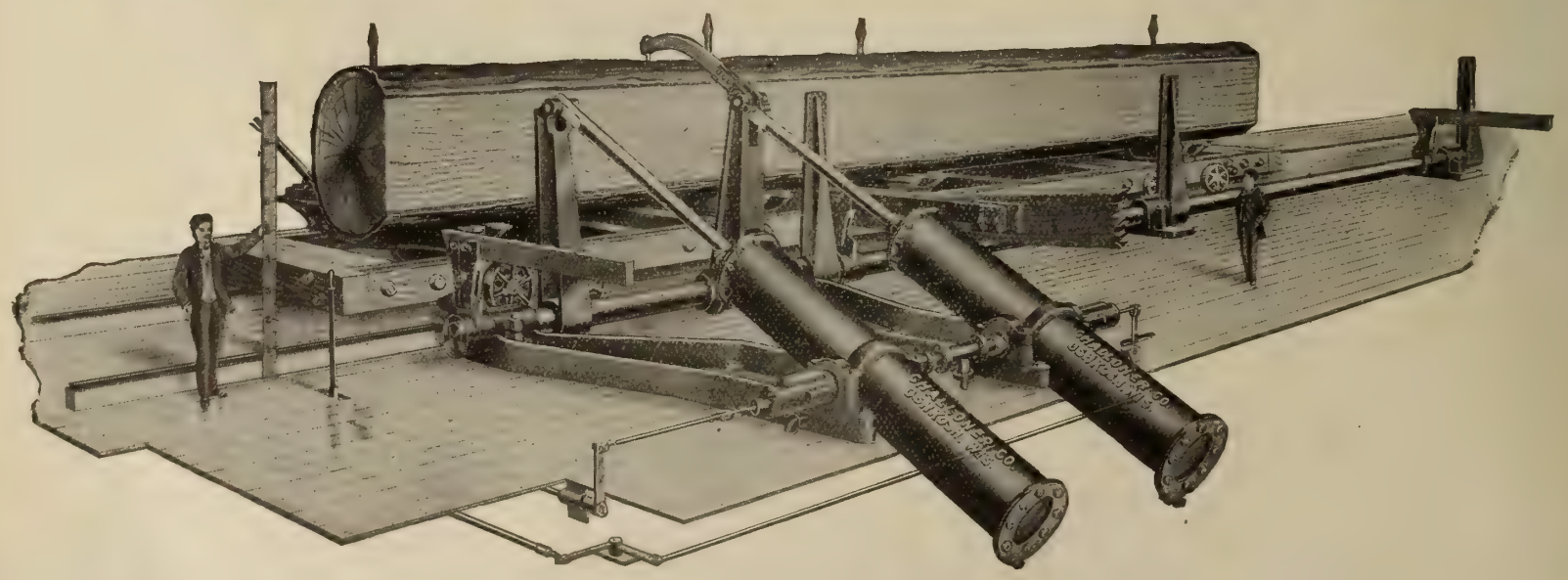
Cables carried in stock for renewals

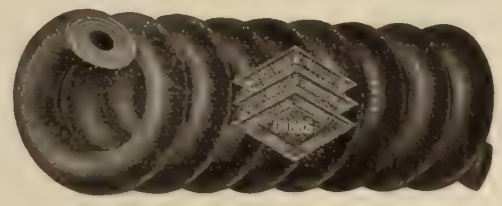
THE SIMONSON LOG TURNER



This is the only Log Turner that uses no tooth bar and turns the log away from the carriage. The log is turned on the log deck, thus relieving the carriage of all strain and jar. ill handle small logs as quickly as any "nigger" and logs scaling 500 feet and over much quicker. Will handle larger logs than is possible with a "nigger."
Don't buy a Log Turner of any kind till you investigate the Simonson.

CHALLONER COMPANY - OSHKOSH, WIS.

COBBS HIGH PRESSURE SPIRAL PISTON AND VALVE ROD PACKING



"Cobb's" Packing is especially adapted to withstand heat and highest pressure. The rubber core is oil and heat-proof and will not harden, but remain elastic indefinitely. The outside covering is made of material that is not affected by heat. The lubricant employed is the result of much scientific research and is absolutely free from grit or acids.

We make everything in rubber requisite for an engine room. The following are some of our specialties:

VULCAN SPIRAL PACKING, MAGIC EXPANSION SPIRAL PACKING, AMAZON HYDRAULIC SPIRAL PACKING, INDESTRUCTIBLE (WHITE), KARBONITE (BLACK) RUBY (RED), AND SALAMANDA SHEET PACKINGS, RUBY SECTIONAL GASKETS, GAUGE GLASS RINGS, DISCS, BIBB WASHERS, PUMP VALVES DIAPHRAGMS, PACKING RINGS, RUBBER BELTS, &C.

MANUFACTURED AND PATENTED EXCLUSIVELY BY

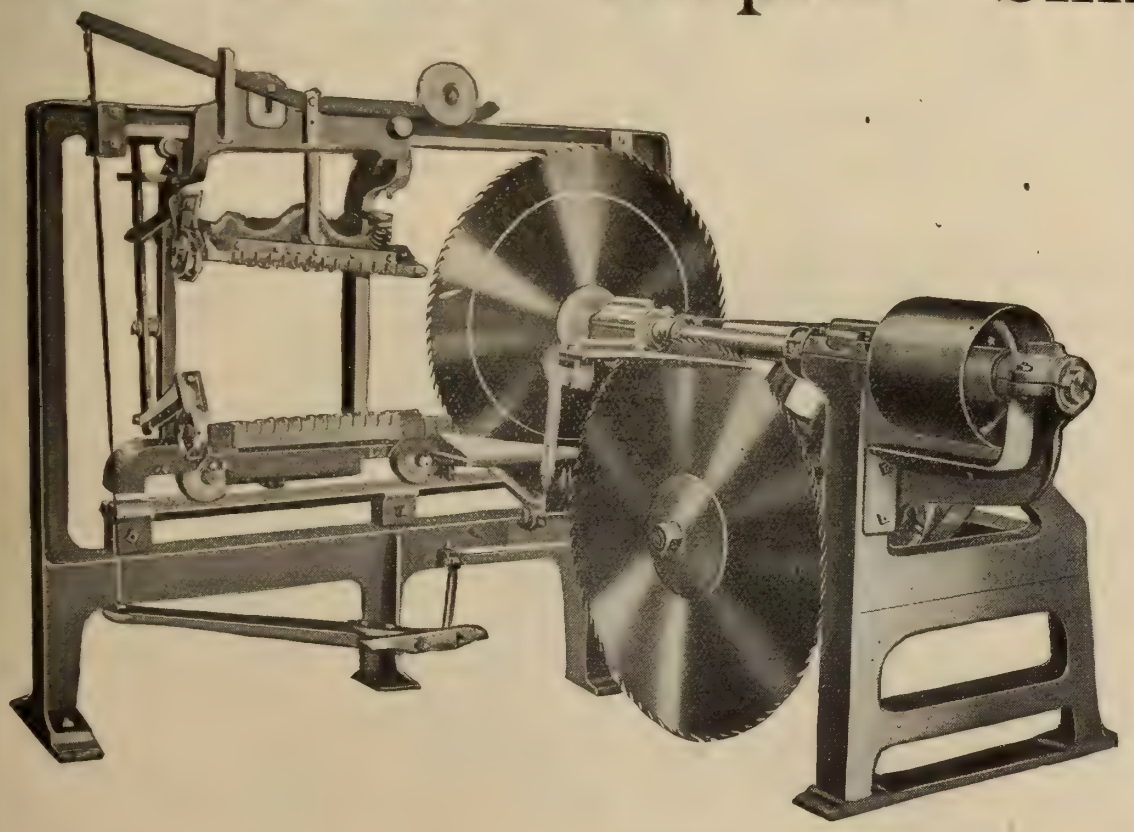
NEW YORK BELTING & PACKING COMPANY, LIMITED

91 and 93 Chambers Street, NEW YORK

CANADIAN AGENTS: **THE ECONOMICAL MANUFACTURING & SUPPLY CO., Limited**

173 Queen Street East, TORONTO, CANADA

Iron Frame "Simplex" Shingle Machine



IN this, our latest design of Shingle Machine, we have incorporated all the advantages contained in our wood frame "Simplex" and added several improvements.

The arbor has been made heavier and a third bearing added to support it outside the driving pulley. The method of putting lead in the saw arbor has been greatly improved. This is now done by swinging on a centre directly under the saw the whole frame which carries the arbor. Thus the alignment of the bearings is not in any way affected and there will be no danger of hot bearings after the lead has been changed. The change may be made while the machine is running and without stopping the carriage.

An improvement has also been made in the method of driving the edger. It is belted direct from a shaft running at right angles to the main arbor from which it is driven by means of a bevel friction. This makes a very neat, compact drive and has proved satisfactory in the mill.

The rail on which the carriage travels is made of square steel and when worn can be renewed by simply turning upside down.

Over three hundred of our Upright Machines (wood and iron frames) are in use in British Columbia and Washington.

MANUFACTURED ONLY BY

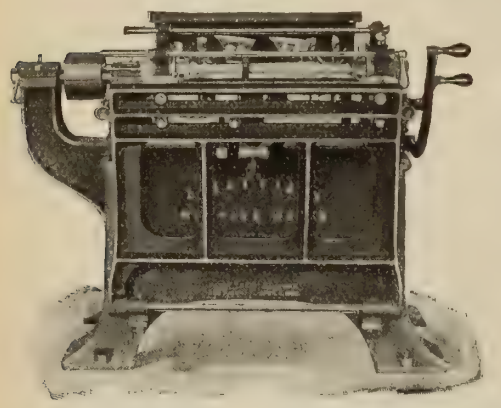
Letson & Burpee, Limited, Vancouver, B. C.

CRANBROOK SASH & DOOR CO.

Manufacturers of
Interior Finish
DOWELL DOORS
WINDOWS, TRIMMINGS
BRACKETS
DETAIL WORK A SPECIALTY
Lumber - Lath - Shingles
Shipments in Straight or Mixed Carloads.
Address—CRANBROOK, B.C.

You Can Save Money Turning Balusters

Besides Making More of Them and Much Better Ones



If You Will Use

Our No. 2 Baluster Machine

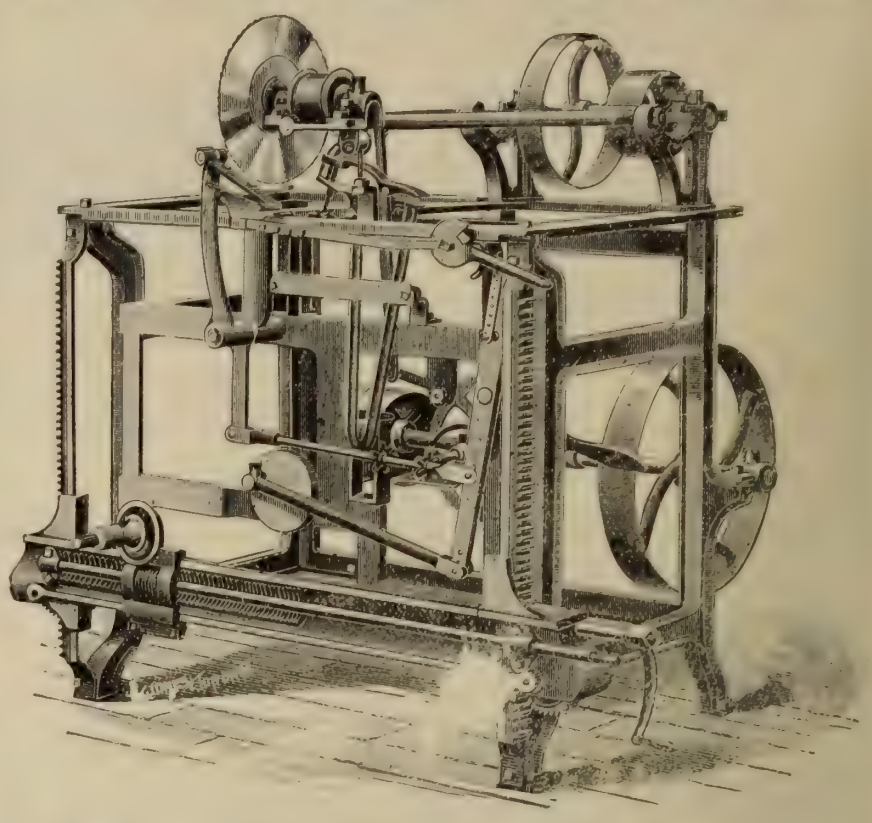
Turns Balusters, Spindles, Table Legs, any pattern, hard or soft wood, 1,000 pieces daily. Does perfect work at less cost than by hand. Stock is held in chucks, instead of between centres, avoiding all vibration. If you make balusters you should investigate carefully.

May we send samples of work and detailed description?

C. Mattison Machine Works, Beloit, Wis.

871 FIFTH STREET

AUTOMATIC SAW SHARPENER



An Ingenious Machine; Easily handled and adjusted; perfectly automatic, and solidly built. The operator can give the saw teeth any shape desired, and without attention, other than to adjust and start it. The machine gives the saw perfectly shaped and uniform teeth. The Circular Saw Size is especially designed for large saws, but it can be arranged for shingle saws as well if required.

We Manufacture **Saw and Shingle Mill Machinery, Carriages, Saw Frames, Edgers, Trimmers, Pneumatic Buffers, Lath Machines, Bolters, Shingle Machines, Jointers, etc.** Write to us for our Catalogue.

Mowry & Sons, - Gravenhurst, Ont.

THE

FAMOUS JOHNSON

UPRIGHT SHINGLE MACHINE

Capacity 30,000 to 45,000
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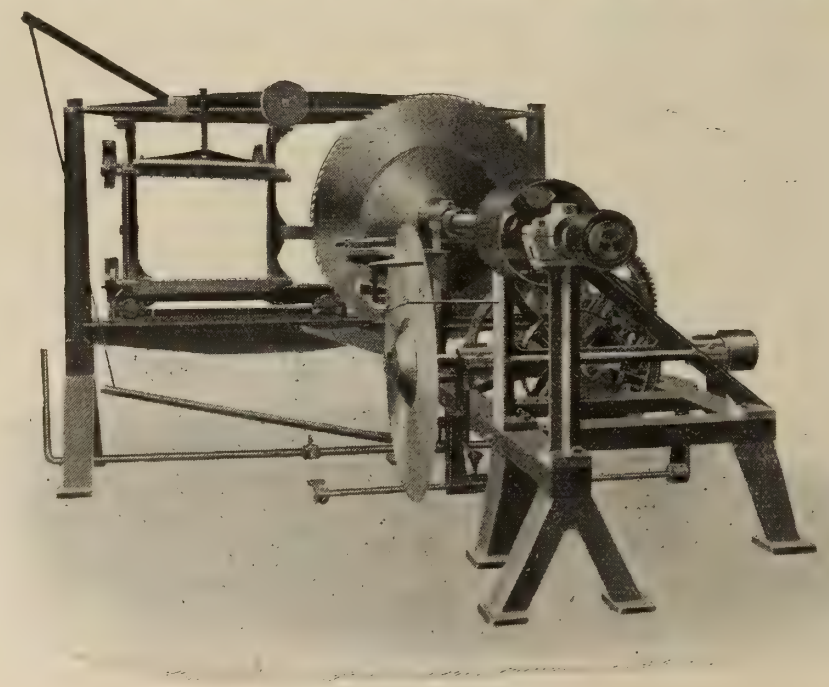

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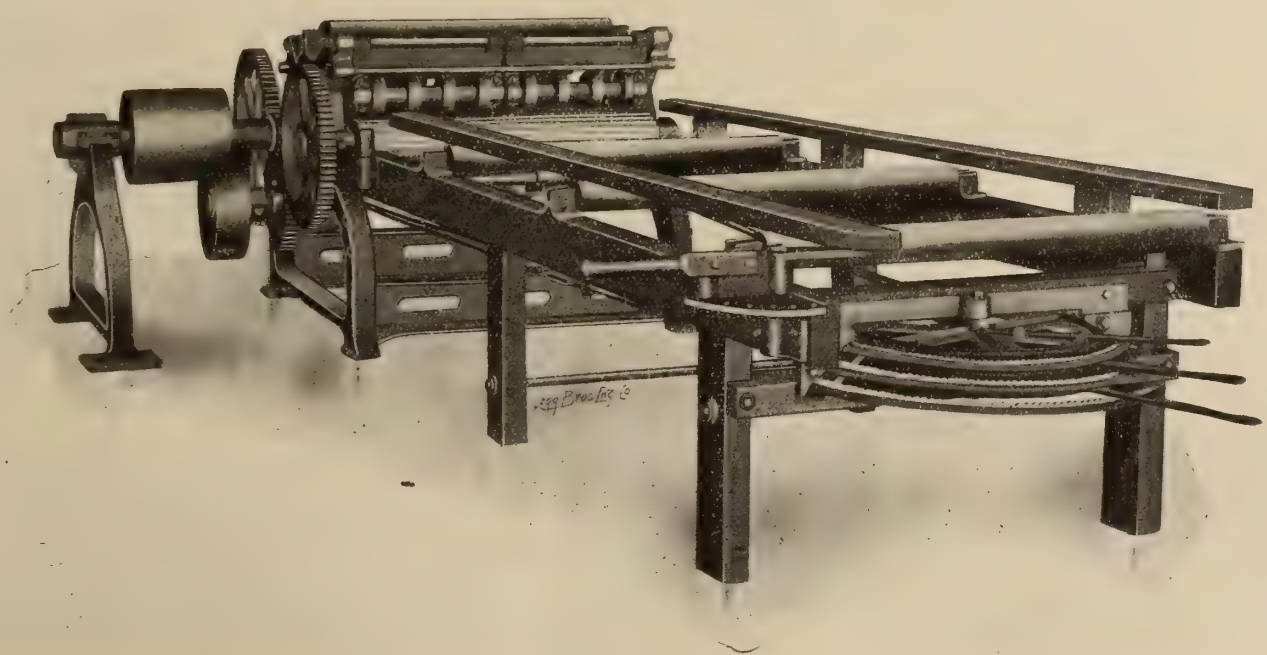

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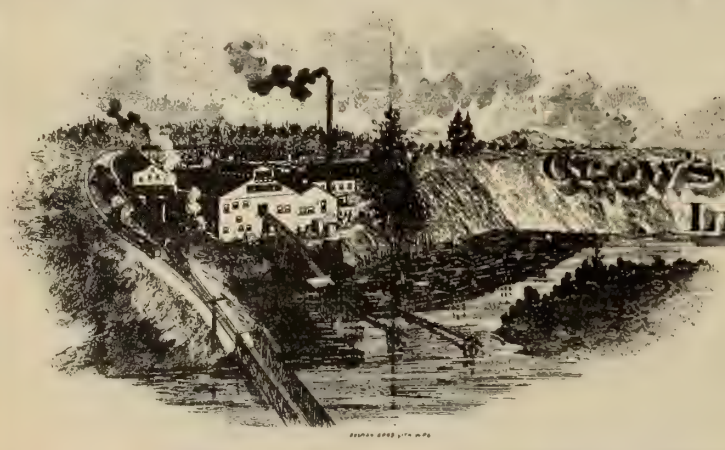

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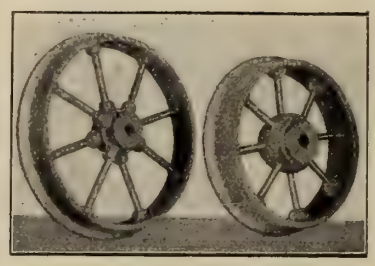

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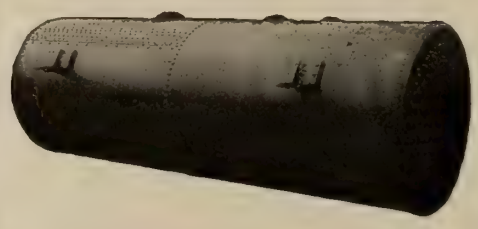

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CANADA LUMBERMAN
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VOLUME XXVIII. NUMBER 8. } TORONTO, MONTREAL — AUGUST, 1907 — WINNIPEG, VANCOUVER { TERMS, $1.00 PER YEAR Single Copies, 10 Cents

Storage Battery Locomotives in the Lumber Industry

The use of storage battery locomotives in the lumber industry dates from the receipt of three Jeffrey storage battery locomotives, with necessary equipment, by the Potlatch Lumber Company at their immense new plant located at Potlatch, Idaho. This plant,, the largest in the world, consists of a saw mill, sorting sheds, planing mill, dry kiln, storage sheds for dry lumber, storage yards for green lumber and immense loading docks, besides the necessary power plant and numerous auxiliaries.

The saw mill is an immense frame structure, built on the edge of the Potlatch River, and is fully equipped with band saws, lath machines and the necessary cut-off and rip saws, all of the most modern design; 350,000 feet of lumber per ten hour shift is the plant's present capacity. Adjacent to, and just west of the saw mill, are the sorting sheds, a frame building 540 feet long, to which lumber from the saw mill is conveyed by chain conveyers for sorting, and loading on trucks for transferring to the storage yards.

The planing mill, which is located to the north of the saw mill, is a large building of steel construction, equipped with the most modern machinery for dressing lumber, and has a capacity of 325,000 feet per day of ten hours. The west side of the saw mill is thoroughly equipped with narrow gauge tracks for moving the dry lumber from the yards and dry kiln to the planer.

On the east side of the saw mill are located the immense loading docks, where the dressed lumber can be loaded directly into freight cars for shipment, and the excess lumber transferred by an excellent trackage system to storage sheds located just north of the planing mill, and which have a capacity of 5,000,000 feet of lumber. Storage yards for green lumber are also provided. These storage yards, located at the northeast corner of the property, cover sixty acres at present, with an additional sixty acres in course of construction. The yards are laid out in the form of a square, and are practically level. A narrow gauge (30 inch) belt line track is laid around the entire yard, and there are twenty-four alleys running through the yard, each alley being double tracked and equipped with the necessary switches, cross-overs, etc., to facilitate the rapid handling of the cars.

LOCOMOTIVE AND TRAIN.

LOCOMOTIVE AND TRAIN IN YARD.

Taken altogether, the plant is probably the finest and best equipped lumber manufacturing plant in the country, and is a worthy monument to the skill and enterprise of the men who designed and constructed it.

The conditions existing at this plant and its large capacity rendered it necessary to use some method other than horse haulage to handle the output of the mills. Steam and gasoline locomotives were out of the question, owing to the fire risk entailed. Trolley locomotives were not to be thought of, owing to the heavy first cost of installation, and the complex system of wiring, as the yard is to have fifty miles of track when completed. Storage battery locomotives were therefore finally decided upon, and after much correspondence and investigation, three of them, together with an extra battery and the necessary charging apparatus, were ordered from the Jeffrey Manufacturing Company, of Columbus, Ohio.

Each locomotive is of seven tons weight, including the weight of the battery and cab. The storage batteries are arranged for charging on 250 volts and form the only source of energy supply, there being no trolley or third rail collector provided. The entire weight of the equipment is supported by the drivers, and is therefore available for tractive effort.

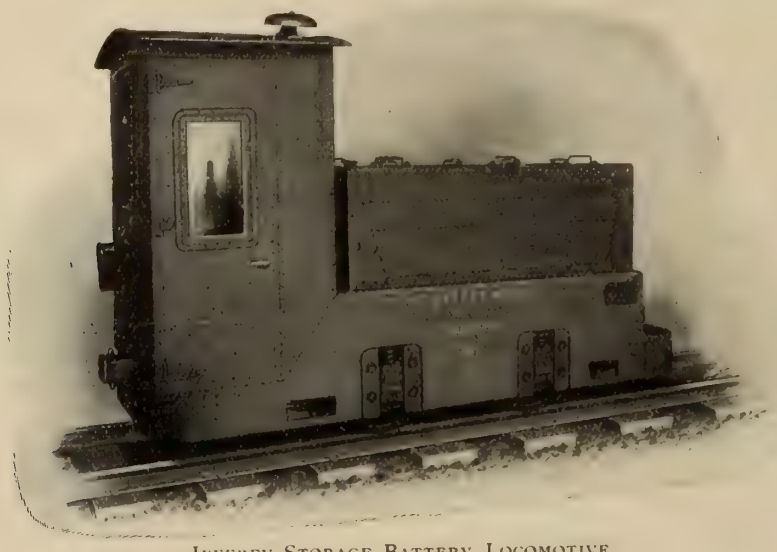
The electrical equipment consists of two Jeffrey class M. H. 12 railway motors, wound for an efficient speed when operating on current supplied by the batteries; a Jeffrey locomotive type storage battery, designed especially to withstand the excessive demands and shocks frequent in locomotive service; a Jeffrey class M. B. 17 controller and proper rheostat; Jeffrey locomotive fuses for protection of the electrical equipment; a Weston combination volt and ampere meter; charging plugs; and two Jeffrey class 4 electric headlights.

Mechanically, the locomotive is complete in all features, being provided with an efficient self-locking brake, a complete rail sanding mechanism for both directions of travel, convenient means for lubrication of bearings, and for handling all parts of the equipment. A substantial steel cab encloses the controlling end of the locomotive, and protects the motorman from the weather. A convenient locomotive house for the housing of the locomotives was equipped by the Jeffrey Manufacturing Company with simple but efficient means for handling the batteries and equipment when necessary.

The charging plant, which was also supplied by the Jeffrey Manufacturing Company, consists of a 35 kw. belt driven 250 volt direct current generator driven by an 11 x 12 en-

gine. The generator switchboard contains all the necessary instruments for the proper control and protection of a dynamo used for storage battery charging. In the locomotive house are provided three sets of charging resistances and the necessary switches and protective devices, so that all three locomotives can be charged at once.

This outfit was delivered at the plant of the Potlatch Lumber Company, Potlatch, Idaho, on December 4th, 1906, and was operated during the trial period by an engineer sent out by the Jeffrey Manufacturing Company. The storage battery locomotives replace horses for handling the output of the mills. The cost of horse haulage was excessive, being eleven cents per thousand feet of lumber moved, and this price was only possible under the best conditions of weather and track. During heavy snows and frosty weather, the cost for horse haulage doubled or trebled, and often the plant was compelled to shut down on account of the inability of the horses to get about at all.



Jeffrey Storage Battery Locomotive.

During the trial period the locomotives were operated under great disadvantages, as the snows were exceptionally heavy. It was often very difficult to handle the work, as the snow packed so that it was almost impossible to keep the tracks open, and the wheels on the rails. For several days it was necessary to keep the tracks open by pushing a 30 ton train ahead of one of the storage battery locomotives to push the snow from the tracks, and this method proved so successful that it was used in drifts of wet snow up to two feet deep.

Notwithstanding all the disadvantages under which the locomotives were operated, they handled the output of the mills for seven cents per thousand feet during fair weather, and under the worst possible conditions of weather and track the cost of hauling never went over eight and seven-tenths cents per thousand feet. The superiority of the locomotives over horses for this work was so clearly demonstrated that they were accepted with many favorable comments upon their successful performance at the end of the trial period.

The cars for handling the lumber are built with solid pine frames. The wheels are of cast iron, eighteen inches in diameter. The cars weigh 750 pounds each. Each car is loaded with from 2,000 to 5,000 feet of green lumber, and these loaded cars are coupled up into trains of from six to twelve loads, making a train load of from 12,000 to 60,000 feet of green lumber. These trains are hauled out to the storage yards by the locomotives, and there split up, each car being set in its proper alley for unloading. On the return trip the locomotives gather up empty cars from the different alleys and return them to the sorting sheds for reloading, or, if there are no empties to be returned, the locomotives bring in train loads of dry lumber from the storage yards to the planing mill.

With the tracks open and in fair condition, the two locomotives handling this work, each locomotive makes an average of ten trips per day, hauling when the mill is operating at full capacity 55 to 74 loads out to the yards.

The third locomotive is used in the yards "spotting" the loaded cars to the proper piles for the lumber pilers, hauling dry lumber from the storage yards and dry kiln to the planing mill and, at odd times, gathering empty cars and placing them conveniently for the other locomotives to pick up. This locomotive spots on an average 100 loads per day, besides hauling from 20 to 30 loads, or 50,000 to 70,000 feet of dry lumber from the storage yards to the planing mill.

All three locomotives leave the charging shed at 7 a.m. fully charged, work until 12, come into the shed and are charged during the noon hour; start out at 1 p.m. and work until 6 p.m., when they are run into the shed and charged during the night for the next day's run. This gives ten hours' clear working time to each locomotive. The locomotive crews consist of two men, a motorman and switchman.

On several occasions during and since the trial period the advantages of storage battery locomotives over other haulage systems have been demonstrated. Owing to the severe winter weather frequently prevailing, horses could do nothing, being unable to get a footing in the heavy snowdrifts, while the locomotives ran regularly and kept the lumber moving from the green shed and the empty cars returning, thus enabling the mill to run on days when a shut-down with any other system of haulage would have been inevitable.

The results attained in this installation have thoroughly demonstrated the efficiency and great adaptability of the Jeffrey storage battery locomotives.

Breaking a Track Through Snow.

VOLUME OF AIR REQUIRED FOR DRYING.

In the drying of green lumber fresh from the water the air supply per pound of water evaporated frequently ranges between 2,000 and 5,000 cubic feet. A great deal depends upon the manner of exposure to the air, i.e., to the method of piling in the case of lumber. The enormous volume of air actually required for the mechanical process of taking up and carrying away the water is the best evidence of the necessity of positive and ample air movement.

Commercial success in drying, therefore, requires that the substance be exposed to the air in the most efficient manner; that the temperature of the air be as high as the substance will stand without injury and that the air change or movement be as rapid as is consistent with economical installation and operation. Under the mistaken idea that heat is the only essential to the drying process, dry rooms are only too frequently built with ample heating surface but with practically no opportunity for air circulation. Only because of natural leakage of air do they avoid dismal failure. Even where provision is made for circulation of air it is often the case that dependence is placed solely upon the effect of the heat to produce air movement. Such movement is sluggish at best and frequently uncertain. High stacks tend to improve the circulation, but in so far as the heat required to operate them might be otherwise usefully employed they are expensive as compared with mechanical means. Hence the use of the heating surface is massed in a remarkably small space. With the fan the volume is always under control as is also the temperature.

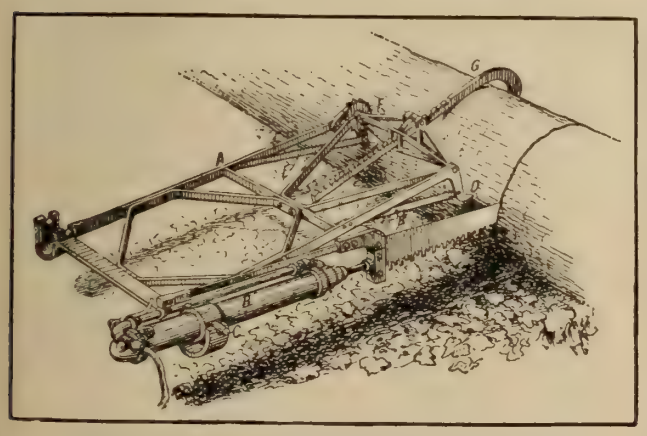
PNEUMATIC LOGGING-SAW.

In spite of the introduction of all sorts of special machinery into logging operations, particularly for getting logs to the mills, the primary steps of felling the trees and sawing them into lengths have been accomplished mainly by hand. A notable exception is described in "The Scientific American" by E. A. Sterling. Says this writer:

"Machine saws of practical value for cutting standing timber have never been perfected, largely because the necessary power has not been available, and also on account of the

The Saw in Operation.
Courtesy of the Scientific American.

danger and difficulty of handling a machine of any kind in rough forest land. The same is true in the main of sawing the felled timber into standard logs. An exception to the latter is found on the lands of the McCloud River Lumber Company in Siskiyou County, Cal., where a compressed air 'bucking-up' saw has been successfully used for some years. The trees are felled by hand, and cut into log lengths by the machine saw. The company operates on comparatively level land near the base of Mount Shasta, where the forest of yellow pine, sugar pine, and white fir is com-



The Compressed-Air Saw, Showing the Adjustable Frame and Pivoted Cylinder.
Courtesy of the Scientific American.

posed of unusually large individual trees in open stands. The ground cover is a rather dense chaparral.

"The machine consists of a traction engine equipped with an air compressor and a storage tank. To the air tank are attached rubber hose which give a working radius of 300 feet. The saws, which are similar to a heavy cross-cut saw, are actuated by a piston working in a small cylinder set in a movable frame, which can readily be attached to logs of any diameter . . .

"The usual outfit consists of three frames and one saw. The saw when started is left to work automatically, while the two empty frames are being moved to new cuts and attached to receive the saw. A 'swamping' crew precedes the compressed air saw and trims the felled trees, throwing the brush to one side to give room for the machines. The traction engine is moved under its own power to convenient points, where several trees are within reach of the transmission hose. There is a decided economy both in time and labor in the use of the compressed air machine. To run it requires nine men, and the average daily cost, exclusive of repairs, is $25. Its daily capacity is from 125,000 to 140,000 feet board measure, though under exceptionally favorable conditions a cut of 160,000 feet is possible. To secure the same output with hand labor would require from fifteen to seventeen men at a daily wage of $2.50, the average cut per man being from 8,000 to 10,000 feet. This gives a daily saving of $12.50 to $17.50 in favor of the compressed air saw, on an output of from 125,000 to 140,000 feet board measure of logs. This is ample to recover repairs and give a sustained balance above the interest on the initial investment. There is no apparent reason why a similar machine should not be used in other regions where conditions are favorable."

THE TIMBER SUPPLY AND CONSUMPTION.

Every person in the United States is using over six times as much wood as he would use if he were in Europe. The country as a whole consumes every year between three and four times more wood than all of the forests of the United States grow in the meantime. The average acre of forest lays up a store of only 10 cubic feet annually, whereas it ought to be laying up at least 30 cubic feet in order to furnish the products taken out of it. Since 1880 more than 700,000,000,000 feet of timber have been cut for lumber alone, including 80,000,000,000 feet of coniferous timber in excess of the total coniferous stumpage estimate of the census in 1880.

These are some of the remarkable statements made in Circular 97 of the Forest Service, which deals with the timber supply of the United States and reviews the stumpage estimates made by all the important authorities. A study of the circular must lead directly to the conclusion that the rate at which forest products in the United States have been and are being consumed is far too lavish, and that only one result can follow unless steps are promptly taken to prevent waste in use and to increase the growth rate of every acre of forest in the United States. This result is a timber famine. This country is to-day in the same position with regard to forest resources as was Germany 150 years ago. During this period of 150 years such German States as Saxony and Prussia, particularly the latter, have applied a policy of government control and regulation which has immensely increased the productivity of their forests. The same policy wil achieve even better results in the United States, because we have the advantage of all the lessons which Europe has learned and paid for in the course of a century of theory and practice.

Lest it might be assumed that the rapid and gaining depletion of American forest resources is sufficiently accounted for by the increase of population, it is pointed out in the circular that the increase in population since 1880 is barely more than half the increase in lumber cut in the same period. Two areas supplying timber have already reached and passed their maximum production—the Northeastern States in 1870 and the Lake States in 1890. To-day the Southern States, which cut yellow pine amounting to one-third the total annual lumber cut of the country, are undoubtedly near their maximum. The Pacific States will soon take the ascendency. The State of Washington within a few years has come to the front and now ranks first of all individual States in volume of cut.

At present but one-fifth of the total forest area of the United States is embraced in national forests. The remaining four-fifths have already passed or are most likely to pass into private hands. The average age of the trees felled for lumber this year is not less than 150 years. In other words, if he is to secure a second crop of trees of the same size, the lumberman or private forest owner must wait, say, at least one hundred years for the second crop to grow. As a rule, such long-time investments as this waiting would involve do not commend themselves to business men who are accustomed to quick returns. But the States and the nation can look much farther ahead. The larger, then, the area of national and state control over woodlands, the greater is the likelihood that the forests of the country will be kept permanently productive.

THE TIME FOR CUTTING HICKORY.

As is known to the trade at large, hickory stumpage, throughout its entire range of growth in the United States, is becoming extremely scarce. Hickory is a wood for which thus far there has not been found a satisfactory substitute. Its rapid diminution is an absolute menace to the very important industry of vehicle production, and the situation is looked upon with concern by everyone interested in this great branch of American commerce.

The "Hardwood Record" is in receipt of a communication from a prominent wheel manufacturing concern of Central Ohio, which suggests that it would be a good idea to ask all manufacturers of hardwood lumber to make it a rule to saw hickory only between September 1 and January 15. This is the best and only logical time for the felling and sawing of this valuable timber. The writer contends that well toward twenty per cent. of the hickory now produced in the country is going to waste on account of its being sawed too late in the spring, when the atmosphere causes checking and discoloration of the wood.

The above is certainly a pertinent piece of advice, for too great care cannot be taken in order to make the modicum of hickory stumpage remaining last as long as possible.

The Wholesaler—Why He Is Necessary

The lumber business, as a result of many years of development, has naturally divided itself into four classes or branches, namely, first, the manufacturer or producer; second, the wholesaler, jobber, and commission merchant, or, if you please, the middleman; third, the retailer, which includes the large factory trade, the door, sash, and trim trade, etc.; fourth, the consumer. We find similar divisions in nearly all kinds of business, which only proves that we must be carrying on our business in the right way.

Many years of experience has demonstrated that the best interests of all lumbermen are best conserved if the above lines are observed. I do not mean to say that these lines are "hard and fast." As a matter of fact these divisions do overlap. There are many wholesalers who have found it necessary, in order to make sure of all or a part of their supply, to go into the manufacturing of lumber either directly or indirectly; and on the other hand some manufacturers have found it both desirable and profitable to market part or all of their own product. This does not affect the general proposition as laid down above. These wholesalers who manufacture have not thereby ceased to be wholesalers; they are wholesalers and manufacturers; and these manufacturers who sell their own products have not ceased to be manufacturers; they are both manufacturers and wholesalers. But these men who thus carry on the double business, must maintain separate departments for both manufacturing and wholesaling.

It goes without saying that the place for the manufacturer or producer is at his place of production, and generally speaking each manufacturer has only one such place. In order that he may get the most out of his logs with the least possible cost, it is his business to be on the ground. That he may succeed, his best efforts must be given and even then his task is not an easy one, and without this close personal attention the best results are rarely, if ever, attained. Fully two-thirds of your members are, I believe, manufacturers, and it needs no argument of mine to convince this audience that after the manufacturer has done his duty by his mill he has little or no time left for anything else.

This personal attention is as true of selling lumber as it is of producing it. A man must know his customer, his wants, his peculiarities, his methods; in short, he must know in a large degree the customer's business in order to please him. This the wholesaler can and does do. Things go wrong in the selling and delivery of lumber as well as in the producing of it. To keep the trade moving requires close personal attention. This close attention the manufacturer cannot give without in a measure at least neglecting his business at the mill or producing point. That some manufacturers distribute their own product is true, but in order to do so to good advantage they become to all intents and purposes wholesalers as well as manufacturers; they employ salesmen and install a complete outfit that corresponds fully with that of any other wholesaler as already stated.

It is just as true in the lumber world as anywhere else that no one can be in two places at the same time. Therefore, when a man, either by himself or by his representative, is meeting his customers he ceases to that extent to be a manufacturer and becomes a wholesaler. Whether a man or a firm wishes to be this is purely a matter of policy which each one must decide for himself. In any event the fact remains that the selling of lumber is the function of the wholesaler and is as firmly established as that of the manufacturer or retailer.

There is another function and a most important one which the wholesaler has performed, and which we must not overlook. In every lumber producing section there are small manufacturers who produce comparatively a small amount of lumber when each one is considered by himself, but in the aggregate the result is very large. These men are good, honest industrious men, but they are men of small capital and they find it almost impossible to carry their operations without outside help, and in order to keep their operations alive, support themselves and their families, they turn to someone for assistance. Many wholesalers, in order to secure supplies of lumber, make advances to these small manufacturers, depending oftentimes upon nothing but the honesty of the men to whom these advances are made, and it is a great tribute to the lumber trade in general that only in the rarest of instances are the wholesalers disappointed in their men and lose any part of the money which they advance. It is no reflection at all upon these small manufacturers that they are thus compelled to seek aid and assistance. The larger manufacturers do the same thing, only in another way. They go to their banks and have the banks discount notes, the proceeds of which are used to carry their operations along during the long time of getting lumber in shipping condition. We all know these small manufacturers. We all know how hard they work. We all know what difficulties they have to overcome, for it is no easy matter, particularly in certain sections of our country, as in the mountains of the south, to get the logs cut, hauled in many instances several miles to the mill, and then hauled in many other instances a great number of miles to the railroad tracks. The weather is bad, the roads in certain seasons of the year are impassable, and even after these difficulties are overcome it is often necessary for these men to wait days, and weeks, before the railroad companies deliver to them cars on which the lumber can be shipped. This advancing of money to these manufacturers by the wholesaler has become a recognized custom in the trade and is only an added reason why the wholesaler is a necessity in our business.

Up to this time we have considered this mattter entirely from the viewpoint of policy, but there is, I think, another side to it, namely, that of the ethics of the trade, and I do not know how better to touch this side than by relating an incident that is said to have happened in the State of Connecticut—the home of the genuine "Yankee." The incident is a story—with a sequel.

One hot summer afternoon, many years ago, the small boys of a country village in the beautiful valley of the Connecticut River, were gathered, as boys were wont to do, in the country store. There was nothing unusual about the store or the boys. The boys were full of fun and innocent mischief. It so happened that on the counter was a box of marbles, dear to the heart of every boy, and while indulging in some boyish tricks this box of marbles was upset and the marbles were scattered on the floor among the boxes, barrels, nail kegs, etc.

The proprietor, who was a young man with an eye for the main chance, wished to get his marbles again and proposed to the boys that they should pick them up, and as an inducement promised the boys that he would give each boy one-half of all he found. The boys fell to with great industry, and shortly all the marbles had been found. Now the proprietor, still, as he thought, with an eye to the main chance, quietly locked the front door and put the key in his pocket. He then proceeded to take each boy and empty out of his pockets every last marble, and without dividing at all, as he had promised, put each boy out of doors in turn, again carefully locking the door. This operation he continued until all the marbles were again in the box and all the boys were out of doors, sadder, but wiser. It was a sharp trick, but there was a sequel.

Twenty-five years passed. The boys had grown to be men, and the shrewd storekeeper had outgrown the country village and had moved to town. He was prosperous and rich, but not so rich that he did not crave more money, even as he craved more marbles. He had an opportunity to increase his wealth, but he needed more ready money than he had, so he did what we all do—he went to his bank. He laid his case, his needs, and his collateral before the cashier; the cashier examined them all, was willing to consider the loan, and asked our old friend to call again the next day.

In the meantime the cashier called on a young and rising lawyer, who was well known to him. He told the lawyer about the man and his application for the loan, he said the man was well-to-do, his project feasible and his collateral satisfactory, but the loan was a large one and he wanted to know something about the man himself. In other words, he

wanted to know the "moral hazard." Now it so happened that the young and rising lawyer was one of the little boys who had taken part in the marble episode twenty-five years ago, and the whole scene recalled itself to him so vividly that he just related it to the bank cashier exactly as it had happened, without any comment.

The cashier listened, and went away, but the next day when our old friend came in he returned him his collateral and declined to make the loan because the moral collateral would not bear inspection.

Gentlemen, I do not vouch for the truth of the story, although it was told me as having actually taken place. I care not whether it is true or not, for the principle is as true as the everlasting hills.

The application is perfectly plain. Our friends, the wholesalers, have gone into byways and highways and gathered up the trade (the marbles, if you please); they have brought this trade to the manufacturer and have given it to him; even perhaps educated him and told him who the customer is and perhaps where he lives; in short, have educated the manufacturer. The wholesalers not only expect, but they are entitled to their fair share of the division of the profits (the marbles, if you please), and I firmly believe that in the vast majority of cases they are getting all they are entitled to. Further, I believe that they are getting their part of the division without any trouble, for in most cases the manufacturer recognizes the wholesaler as his friend and co-laborer; he divides the "marbles" willingly and asks the wholesaler to come again.

IMPORTANT CHANGES IN CANADIAN FREIGHT RATES.

During the last two years the Board of Railway Commissioners has heard a great deal of evidence with regard to freight tariffs. On May 23rd of this year a conference was arranged between the chief traffic officer of the Commission, representatives of the Canadian Manufacturers' Association and of the railways, with the result that the Railway Commission has recently promulgated an order which will have an important and far-reaching effect on the commerce of the Dominion east of the great lakes. The order remedies the long-standing complaint of Ontario and Eastern Canada shippers that the railways discriminate in favor of through traffic from the United States to Eastern Canada points as compared with traffic originating on this side of the boundary, and puts into effect the principle of uniform rates for equal distances. As a result there will be a marked reduction of freight rates to the east from practically all points in Western Ontario, the existing unfair discrimination will be done away with, and shippers and the public generally will greatly benefit.

Long-standing Complaint Removed.

It is well known that for many years it has been a cause of complaint against the railway companies that their freight rates from Windsor and other Western Ontario frontier points to the Eastern Canadian markets have been higher, considerably higher in many cases, than the rates charged to the same markets from Detroit and other cities on the opposite side of the boundary line. The order of the Commissioners abolishes this discrimination and makes the Detroit and Port Huron rates the maximum to be charged from Windsor, Amherstburg, Courtright and Sarnia to practically all points east from Chatham and London down to Halifax and Sydney. The same readjustment is to be made at the Niagara frontier, except that, in consequence of the position of Buffalo relatively to Detroit, the rates from the Niagara peninsula, while considerably reduced, will still be slightly higher in some cases than from Buffalo, but this could not be avoided without a disarrangement of the whole plan of adjustment.

A Uniform Classification.

In order to produce uniformity of rates at the frontier a uniform classification became imperative; the Canadian freight classification will therefore apply from Detroit, Buffalo, etc., and on all American traffic into Canada through these gateways, instead of the United States officials' classification, as heretofore. The adoption of the Canadian scale will have the effect of advancing the lower classification on this traffic from American to Canadian points, but the new international rates will be scaled on the first-class rates now in force. This was unavoidable under the interstate commerce law of the United States, for the American companies could not be expected nor could they be compelled to reduce their rates into Canada. It is understood, however, that the rates on American raw material into Canada will not be advanced by reason of the basic changes ordered by the Commission. The new rates will apply the year round, except that between water competitive points the railway companies will have the power to meet the competitive rates of the water carriers by special commodity rates under the authority of the Dominion Railway Act, and the summer class tariffs from Toronto and Hamilton will be so continued. The so-called distributing tariffs at such points as Toronto, Hamilton, Guelph, St. Catharines, Brantford, London, etc., are to be revised on a uniform reduced scale, with the object that each of these points shall have the same rates for the same distances.

Some Interesting Comparisons.

The following is a comparison of a few of the first-class rates to Montreal, other points being correspondingly reduced and the other classes correspondingly scaled:—From Windsor, present winter 70, present summer 60c; new rate 58c. From London and St. Thomas, present winter 66c, present summer 56c; new rate 54c. From Woodstock and Stratford, present winter 64c, present summer 56c; new rate, 52c. From Guelph, present winter 58c, present summer 50c; new rate, 48c. From Hamilton, present winter 54c, present summer 42c; new, winter 46c, summer 42c. From Toronto, present winter 50c, present summer 40c; new, winter 44c, summer 40c. From Kincardine and Southampton, present winter 70c, present summer 60c; new rate, 58c. From Owen Sound, present winter 70c, present summer 60c; new rate 56c. From Windsor, as the basis, the first-class rate to Halifax will be 78 1-2c, as against the present rate of 92c. The differences over Montreal to Quebec points are also considerably reduced, thus St. Hyacinthe intsead of being 8 cents first-class over Montreal will be 4c. Sherbrooke will be 8c instead of 12c. Three Rivers 8c instead of 12c, and Quebec 12c instead of 14c. Some time must necessarily elapse before the railway companies can revise and reprint their numerous tariffs, but no time is to be lost in getting through with this work.

The following is a further comparison of rates:—

	Present 1st Class.	New Basis.
From Windsor to—		
Collingwood	$ 50	$ 42
Brockville	60	50
Orillia	50	42
Quebec	84	70
Halifax	92	78
Sydney	1 00	86
From Chatham to—		
Guelph	36	32
Owen Sound	42	38
Toronto	38	36
Kingston	54	50
From London to—		
Hamilton	30	26
Collingwood	38	34
Toronto	36	32
From Stratford to—		
Mount Forest	24	20
Collingwood	40	32
Orillia	40	34
Toronto	30	28
From Toronto to—		
London	36	32
Stratford	30	28
Hamilton	22	18
Guelph	24	20
Mount Forest	30	28
Owen Sound	34	32
Collingwood	32	28
Orillia	30	28
Peterboro'	30	26
Ottawa and Montreal	50	44
North Bay	46	38
Chatham	38	36

OLDEST TREE IN THE WORLD.

What is thought to be not only the oldest tree in existence, but the oldest vegetable inhabitant of our world, is the dragon tree of the Canary Islands. The age of one of these products is estimated at from four to six thousand years, having thus an antiquity comparable with that of the pyramids. It must not be forgotten, however, that the "big trees" of California claim an antiquity equal to this.—"Inventive Age."

The Ideal Concrete Machinery Company, manufacturers of "Ideal" hollow block machines, London, Ont., and South Bend, Ind., have sent us a copy of their "Primary" catalogue, concerning which they say: "We issue two catalogues—this our 'Primary' —and our 'Complete' catalogue of 172 pages. The Primary and our booklet 'What Others Say About Us,' are sent in reply to all inquiries received, and we believe you will fully coincide with us that it fulfills its mission of discriminating 'honest data and valuable information to a greater extent than ever sent forth by the trade."

THE

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ADVERTISING RATES ON APPLICATION.

THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in every part of Canada in the lumber, wood-working and allied industries. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication in the WEEKLY LUMBERMAN the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN AND WOOD-WORKER is undoubtedly the most direct and profitable advertising medium. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

CAR SERVICE RULES.

An eastern lumberman writes THE CANADA LUMBERMAN AND WOODWORKER as follows: "We wish to ask you for information concerning a question which has arisen under the new Canadian car service rules, which were passed by the Board of Commissioners March 1st, 1906. Rule 2 reads: 'Forty-eight hours' free time shall be allowed for loading and unloading.' We take this to mean four days of twelves hours per day. Under the old law twenty-four hours meant two days, therefore we feel that the above forty-eight hours should be taken to mean four days. This question has arisen in regard to the shipments of the past winter, when we find that the Canadian Pacific Railway has charged us on some cars counting from the date they were set, for instance, a car set on January 6th and completed and billed out on the 9th has $1 charged up to it. You will see that January 6th was a Sunday. We hold that we had four days, and even in the ordinary course we claim there should be no car rental on the above named car, that the time should have been counted from Monday morning until Thursday morning, or if the forty-eight hours means four days it should have been Friday morning."

There is no doubt that forty-eight hours' free time means two days of twenty-four hours each, both day and night being taken into consideration. We would point out, however, that the free time allowed for the loading and unloading of lumber under the existing car service rules is not forty-eight hours but seventy-two hours, an additional twenty-four hours being given for certain classes of goods, including lumber. The Canadian Pacific Railway should not have collected demurrage charges on the car in question set on January 6th. Rule 2 reads in part as follows:

"Forty-eight hours' free time shall be allowed for loading or unloading (except as hereinafter provided). On cars placed for loading, or unloading, before or at 11 o'clock a.m., the free time shall begin at 1 p.m. following; if placed after 11 o'clock a.m., the free time shall begin at 7 o'clock a.m. following.

"Exceptions: (a) Twenty-four hours' additional free time shall be allowed for unloading coal, coke, and lime, in bulk, and for loading or unloading the following descriptions of lumber only, namely, boards, deals, and scantlings.

"No car service toll shall be charged for Sundays or legal holidays."

FREE LUMBER AGITATION STILL.

As if to remind the opposition that the advocates of free lumber have not all disappeared, every now and then some resolution touching the question is introduced into one of the United States legislatures. Senator Hodges, a retail lumber dealer of Olathe, is responsible for the following, recently placed before the Kansas Parliament:

Be it resolved, by the Legislature of the State of Kansas, to wit: That whereas, the manufacturers' price on white pine lumber has increased 100 per cent. during the last ten years, and yellow pine lumber has increased in like proportions,

And whereas the increased price of lumber is due in a great measure to the control of the standing pine and its manufacture by a comparatively few men and is made possible by the tariff prohibiting the importation of manufactured lumber and in that manner restricting the supply;

Whereas the tariff on lumber adds to the already enormous profit of the wholesaler from $35 to $50 a car, and,

Whereas the tariff on lumber is a direct tax to the users and works a particular disadvantage to the farmers of Kansas; therefore, be it

Resolved, by the Senate, the House concurring therein, that our representatives in Congress be instructed to prepare and introduce a bill abolishing the duty on lumber; and be it further

Resolved that our Senators and Representatives in Congress be requested to vote for and support such a measure;

And that a copy of these resolutions be furnished each of our Senators and Representatives in Congress by the Secretary of the Senate.

Much as we would like to see Canadian lumber admitted into the United States free of duty, we cannot accept Senator Hodges' reasoning. The present price of lumber is not due to the control of the standing pine by a comparatively few men, nor is the duty a factor of consequence in establishing the price. The real reason was given very pointedly at the Public Lands Convention at Denver, Colorado, by Gifford Pinchot, United States Forester, in the following words: "It is the general scarcity of timber, not the national forests, that is raising the price of lumber to the consumer, and this is proved by the fact that prices have risen far more rapidly in the east, where there are no national forests, than in the west, where there are many."

The exact situation is also realized by Mr. A. J. Walters, whose resolution, introduced into the Michigan legislature to accomplish the same purpose, commences as follows:

"Whereas, the forests have practically vanished from the State of Michigan and even the shade trees of the field are inviting the mercenary axe, and the price of lumber is so high that the humblest cottage is beyond the reach of a man of modest means, and owing to the destruction of timber, climatic conditions are changing to the detriment of our State; and

"Whereas, the placing of lumber on the free list would tend to deter the destruction of timber, stay the change of climatic conditions, encourage the builder, enliven mechanical trades and preserve the beauty of our fair State," etc. This is a true recognition of the changed conditions. The forests of the United States are denuded to such an extent that the far-seeing legislators are looking to Canada for relief. Sooner or later their number will be increased and the United States will be glad to encourage the import of Canadian lumber.

That the duty is not a factor in establishing the price is proven by the fact that prices of white pine at the mills in Ontario are to-day as high as at producing points in the United States. Nevertheless, our lumber finds a market, and American buyers are getting more numerous each year. An increased consumption in the face of a rapidly diminishing supply tells the whole story.

MEASUREMENT OF AMERICAN HARDWOODS.

American hardwoods will hereafter be measured in the Liverpool market according to the rules of the National Hardwood Lumber Association, that is, on the basis of the full contents of each board. Through the efforts of the National Lumber Exporters' Association, the question has been under consideration for some time, with the result that last month the Liverpool Timber Trade Association practically adopted the American board measure rule.

It is claimed that in the past Liverpool importers have taken a basis of measurement which has meant a reduction of from two to ten per cent. in the quantity. If they bought, for instance, a car load of shipping culls, they would measure off the split ends, nothwithstanding that this defect is admissible in the grade and that it had been taken into consideration in determining the grade. In this way the grade of the board is raised, although so far as the price is concerned it is still reckoned as of the lower quality. Furthermore, in case of pieces claimed to be not up to grade for various reasons, an allowance is not only demanded for the reduction in grade, but an additional penalty is imposed by deducting in measurement for the split or defective portion of the board which has been made the basis of the claim. It is rather singular that Liverpool, if our information is correct, is the only port in the United Kingdom that has insisted on this method of measuring lumber, and it is only natural that the importers should get together and decide to change a custom which promised to seriously affect their business with American exporters.

*Do We Need a Forestry College in Ontario?**

By Thomas Southworth,
Director of the Bureau of Forestry.

Although the student of forestry in a thorough study of his profession must follow studies that tend to cultivate the mind, forestry is primarily a "bread and butter" profession, and if a College of Forestry is to be a success, its graduates must be able to secure lucrative employment as foresters. Upon the question of any considerable number of foresters securing such employment in Canada depends the success and the need of a college to train men for the profession.

Do We Need Trained Foresters?

Do we need train foresters, is a question easily answered. We do. That the men or the interests that would be profitably served by them are all prepared to agree with me in this is by no means certain, however, and unless the men controlling the forested lands of Canada can be brought to this point of view, I cannot see that we have any particular need of a College of Forestry. There are several excellent Schools of Forestry in the United States. The training there is such as to fit men to cope with the forest problems much the same as exist on this side of the international boundary, and if but few openings for foresters offer in this country, we have no need to expend the money and the effort to train the few men required to fill them.

It is apparent, therefore, that our need for a College of Forestry depends on the probable demand by employers for the services of its graduates, and a canvass of the situation in this regard will be of interest. In this I shall refer to Ontario with which I am more familiar than with the rest of Canada.

Who Holds Forest Lands?

The forest lands of Ontario for the purposes of this discussion may be divided into three classes: those under a practically perpetual lease to lumbermen; those under lease to lumbermen for a fixed period; and those still held by the Crown free from lease or "license to cut," as it is usually termed

The first and second classes comprise about twenty-one thousand square miles, or about thirteen and a half million acres of forest lands. On some of these areas the encroachments of agricultural settlement will some time cause the abandonment of the lease or license, but by far the greater part of this area is not adapted for agriculture, and will or should continue to be timber producing. These lands, as stated, are under license to individuals or companies, and the nature of the lease is such as to leave the control and management of them almost wholly in the hands of the lessees, subject to the payment to the State of a ground rent and stumpage dues.

Lumbermen Not Convinced.

In 1903, with a view to ascertain the chances of employment for forestry graduates, I wrote to a number of the leading lumbermen of the Province. Replies were received from all of them, and there was a striking unanimity of opinion among them to the effect that a college graduate would be of little use to them owing to his want of practical knowledge in the bush, saw mill and lumber yard.

I am glad to be able to say that one of these men has so far changed his opinion as to tell me recently that he proposed to engage a forester to go over a newly acquired limit and prepare a working plan for operating it on the basis of removing yearly only the amount of timber that would equal the annual growth. This is very encouraging, and a sign of the times, but it is an isolated case, and cannot be taken to mean that the lumbermen are going to engage foresters in large numbers.

When the graduates in forestry are able to demonstrate their ability to increase the profits of the lumbermen, they may look for profitable employment among them, but not before; and this demonstration must be made in Ontario, or at least in Canada. If they can show that they are no mere theorists, but practical, well-trained men, capable of directing large lumber operations economically, they may be assured of employment by the private holders of timber lands, who are business men and willing to pay for efficient service.

Waste in Lumbering.

I doubt very much if there is any business in this country carried on with so little regard to economy, with so much waste, as the great lumber industry. This state of affairs has been due to no lack of desire on the part of the limit holders to make as much money as possible from their timber holdings, but their operations were conducted on a large scale, often at great distances from the head office, and the proprietors had to depend on the work of men whose whole training had been received under similar wasteful conditions. In most cases these men are not observant except in one beaten path. They learned, in the gradual promotion from a lumber jack or shanty man to foreman and perhaps to superintendent, to estimate the quantity of timber a given tree would make, and to make a good guess at the quantity of standing merchantable pine on a given area, but their methods of removing this timber are in most cases those followed by their predecessors with little change. The damage done to young timber in felling trees which could be largely avoided, they seldom take into consideration. In fact the trees too small to make merchantable timber are usually regarded as of no value. A prominent lumberman told me a few years ago that he had incurred the pitying contempt of his foreman by giving orders that they should not use young pine trees for roads and shanties when balsam, poplar or other less valuable trees could be got for the purpose. Men with their training are apt to have very little idea of the rotation of the forest crops, of the reproduction of trees or many other things useful to know in forest operations involving a long term of years.

Will Learn in Time.

That lumbermen will ultimately recognize the rule of this knowledge, I have no doubt, but they will need to be convinced by the actual work of trained foresters. I do not pretend to say that the methods of lumbering so far followed by Ontario limit owners has not been on the lines of good forestry from the point of view of their financial interests. Practical forestry is simply business, and in the case of these timber licenses issued from year to year, liable to be cancelled if the land was needed for settlement, it was quite natural and wise that the lumbermen should remove all the timber, mostly paid for in a lump sum in advance, as cheaply as possible and as thoroughly as they could. It was liable to burn up, the license might be cancelled, interest charges on the money paid in advance for the timber accumulated, and the lumberman followed proper forestry methods in cutting his timber off without much thought of the future.

What was good forestry for the lumberman, however, was not wise forestry practice for the State, and let us hope that some time even on this class of timber land forestry methods more in the joint interest of the State and its lessee, the lumberman, may prevail. With security of tenure the lumberman would be equally interested with the State in conservative lumbering, and could afford to accept cutting regulations to that end. If, however, the lumbermen will not employ foresters, how are they to be convinced, may well be asked.

Ontario the Big Owner.

By far the greater part of our forest lands are held by the State free from license to the lumbermen, and I submit that the first large employer of properly trained foresters and forestry students should be the State. Under the Forest Reserves Act of 1898, over ten million acres of forested lands, unsuited for agriculture, have been set aside as permanent forest reserves. These reserves will doubtless be added to from time to time as the unfitness for agriculture of other areas is proven. I have elsewhere expressed the opinion that not less than forty millions of acres of similar non-agricultural land in Ontario should be placed in reserves.

Foresters Will Be Needed.

In one of these, the Temagami Reserve, important discoveries of minerals have recently been made; there will be a large number of mining prospectors traveling it this season, and it is probable that some definite policy governing mining development and protecting the State's interest in the timber will be adopted in the near future. The Legislature has just voted $5,000 for "estimating" the Temagami Reserve. This I take to be for the purpose of beginning the systematic examination of the reserve, and I presume will include not merely an estimate of the merchantable pine, but a general topographical survey and an estimate of the various kinds and quantities of timber in order that working plans for the systematic handling of this forest for a long term of years may be prepared. To do this work trained foresters will be needed, and they do not seem to be at present available.

Where They Might Be Employed.

Mr. Southworth went on to show that aside from the forest reserves, the Government employs a large number of men as Crown timber agents, bush rangers, and cullers or scalers. Some of these men might well be trained foresters. In 1898 there were not half a dozen technically trained foresters employed in the United States, now there were about nine hundred. Two hundred are graduates in forestry and more would be employed if they could be got. That the lumbermen will employ these men as soon as they show ability was shown by the fact that Dr. Judson Clark, of the Ontario service, and Mr. Roland Craig, of the Dominion service, had been given more lucrative positions by British Columbia lumbermen. The need for trained foresters he considered already apparent, and it would become increasingly more so, and he had no doubt that the graduates from the school under Dr. Fernow would prove themselves the equal of any on the continent and competent to work out the problems presented in Canada.

*Abstract of an address delivered before the Canadian Institute, Toronto.

WESTERN CANADA

Western Offices of The Canada Lumberman,
615 Hastings Street, VANCOUVER, B. C.; 720-721 Union Bank Building, WINNIPEG, MAN.

CRANBROOK'S SASH AND DOOR FACTORY.

In addition to the many saw mills in its vicinity, the City of Cranbrook, B.C., has what is the only sash and door manufacturing plant in the Southeastern Kootenay district, and probably the only one along the Crow's Nest branch of the Canadian Pacific Railway. This is the Cranbrook Sash & Door Company, successors to Messrs. Leask & Slater, who formerly operated the business on a smaller scale. The present company was formed in November, 1902, for the purpose of manufacturing sash, doors, mantels and all kinds of interior fittings. Shortly after its formation the company erected the large building now occupied by the factory department, and since that time it has been gradually adding other buildings in order to accommodate the increasing demands of business.

The site owned by the company covers an area of about four acres, situated alongside the Canadian Pacific Railway track, and immediately adjoining Cranbrook city limits. The main building is 120 feet long by 80 feet wide, two storeys high, of frame construction and covered with iron roof. At the south end of the main building, and connected with it by an overhead covered archway, is a two storey building 30 feet by 60 feet. The upper flat of this building contains the bench room, while the downstairs is utilized for a lumber shed. Adjoining this is a 20 by 50 foot one storey building, containing the glazing room, and connected with this is the office building. The boiler and engine rooms are in a separate building, adjoining the main building, out on the opposite side from the office. A lane runs past the boiler house, and on the opposite side, placed at right angles to it, are two large sheds, containing mouldings of all kinds. The space between these two sheds is occupied by a track, extending from there into the main factory building. A small transfer car runs on this track, being used to convey mouldings, etc., to and from the shed. At the north end of the main building is the dry kiln, which is 20 by 50 feet. On the other side of the street, just opposite the office, is a warehouse, 40 by 70 feet, two storeys high, alongside of which is a spur line from the Canadian Pacific Railway tracks.

Portion of Second Floor of Cranbrook Sash and Door Company's Plant.

The mechanical equipment of the main building downstairs consists of two circular saws, two rip saws, two planers, a moulding machine, two lathes and cut-off saws. Upstairs is a complete set of E. B. Hayes Company's dowel door manufacturing machinery, comprising dowel door machine, gluer and driver, boring machine, glue vats, and trimming saws. Also on this flat is a tenon machine, panel raiser, shaper, buzz planer and two sanding machines, in addition to cut-off and rip saws.

New Planing Mill of the Crows Nest Pass Lumber Company, Wardner, B. C.

The power plant consists of one 90 horse-power boiler of Waterous manufacture, and a 75 horse-power Waterous engine.

The personnel of the Cranbrook Sash & Door Company consists of Messrs. Albert Slater, W. F. Attridge, John H. Spence, James Woodman, and H. A. McKowan, all practical men of long experience in the sash and door business. Mr. McKowan is the draughtsman and general business manager; Mr. A. Slater has charge of the glazing department; Mr. Woodman of the manufacturing department; and Mr. Spence of the yard and shipping. Mr. Attridge is the accountant in charge of the office.

While the local trade of the company is good, the bulk of their output is sold throughout the Prairie Provinces, where they find a ready market for their whole product.

NEW PLANING MILL OF THE CROWS NEST PASS LUMBER COMPANY.

The Crow's Nest Pass Lumber Company, of Wardner, B.C., began this season's work with a brand new planing mill, much larger than the old one. The new planer has been in full operation ever since the first of March, and the saw mill was started up again on April

1st. On May 7th they commenced running with double shift.

A description of the new planing mill will prove interesting. The building is 96 x 130 feet, of frame construction, entirely metal clad. It is equipped with Berlin woodworking machinery, consisting of one timber sizer 14 inches x 30 inches; two matchers, 6 inches x 15 inches; one inside moulder, 6 inches x 12 inches; one outside moulder, 4 inches x 12 inches; one 54 inch band re-saw, a self-feed rip saw and five trimmer saws. The plant is equipped with a complete blower and separator system, operated by an 80 inch Sheldon fan, put in by Henrich & Pace, of Revelstoke.

The power plant is in a separate building, 54 x 56 feet, sheeted with iron, and is located at one end of the planing mill. This is divided in half, the outer half containing the boilers, while the inner half nearest the mill is again divided, the engine room occupying one side and the filing room occupying the other side. The engine is a 240 horse-power Waterous, 20 x 24 inch cylinders. In the engine room there is also located the electric light plant, consisting of a 500 light Canadian General Electric dynamo, driven by a 12 x 14 inch Waterous engine.

The boiler room contains two Waterous boilers, each 60 inches x 16 feet, running under 115 pounds pressure, and equipped with Dutch ovens, automatic feed and forced draft system.

In the filing room is a Berlin automatic knife grinder, an automatic band re-saw grinder, and a roll saw stretcher, besides the usual smaller tools. The whole planing mill plant and electric lighting system is in charge of Mr. Otto Wisner.

The company have erected a new lumber shed 225 feet long, for all grades of finish; also a new shipping platform, large enough to permit the loading of fifteen cars at the same time. Mr. G. Owens has assumed the position of shipper, in place of Mr. Montgomery, recently resigned.

The Crow's Nest Pass Lumber Company have been doing a good deal of river improvements during the winter, having put in several additions, increasing their log storage capacity to 25 million feet of logs, which was the amount taken at the company's camps during the winter. They have established several new tie camps on the St. Mary's River and expect to get out 200,000 railroad ties during the summer. They are preparing to operate seven large logging camps next year, and have started a large camp at St. Mary's Lake, employing 150 men, getting out logs, ties and poles, which will be mostly of cedar.

The Export Lumber Company, North Tonawanada, N.Y., has been organized, with a capital of $500,000, and the following officers: President, W. A. Taft, of Boston; vice-president, Chas. Weston, of Buffalo; treasurer, W. W. Weaver of Boston; assistant treasurer, H. K. Weaver, of Boston; secretary, W. Allen Taft, jr., of Boston; Canadian general manager, George I. Dewar, of Ottawa. The company was organized under the laws of Maine to conduct an export trade in white pine and spruce, having as its chief markets South American and West India ports.

THE AUSTRALIAN TIMBER MARKET.

Mr. J. S. Larke, Canadian Commercial Agent for Australia, is always on the lookout for opportunities for Canadians. In his last report to the Department of Trade and Commerce he thus refers to an opening for Canadian lumbermen:

"A despatch from New Zealand recently published here says:

" 'The Minister of Lands (after a conference with the Kauri Timber Company), said, referring to the extent of the Kauri timber supplies, that it seemed to be generally understood that not much more than 10 years' timber was available for all the mills now in existence. He favored a scheme to reserve the balance of the remaining timber permanently, and to slacken down the cutting out of the rest, so as not to hasten necessarily the end of the Kauri timber industry.'

"Twelve years ago, when I paid my first visit to New Zealand, I found that one of the strong objections to a preferential tariff with Canada was the fear that it might include timber within its provisions and thus affect the Kauri timber industry of New Zealand, which was then the most important part of its timber trade. I looked as well as I could into the extent of the Kauri timber limits, and the rate of consumption, and I ventured to say that within fifteen years it would cease to be an exportable article from New Zealand, and they would be compelled to import building timber from abroad. The opinion of the Minister of Lands supports the view that was then taken.

"Kauri pine has been the chief and almost only rival to Oregon in this market. All the more that with the other New Zealand pines, it has been admitted free under the old Victorian tariff and under the Commonwealth tariff. I have no statistics that will enable me to judge as to the quantity of Kauri that is now imported into Australia, as the return of imports include all New Zealand pines under one head, and the amount of white and red pines have very largely increased during the last ten years. These pines, however, are very poor building material, and are only used in cheap constructions, and the white pine is used largely for the making of butter boxes. I have not on hand either any figures, which show the amount of Kauri yet uncut. The timber lies wholly north of Auckland. In 1905 the forest area of that section of New Zealand was stated to be 1,800,000 acres, and in 1906 it had been reduced to 950,000 acres. These forests, however, are not all Kauri, but include a very considerable variety of timber. Already cargoes of Oregon have been shipped to Wellington and the south of New Zealand. It is quite clear that the Kauri pine, though some quantities will yet come, has ceased to be a rival in the Australian market to the timber of British Columbia.

"The mills of British Columbia are not in a position to take advantage of any decrease in competition. They are full of orders at the present time. The latest advices state there was no cargo on the way to Australia and but one vessal sent down to load. It is anticipated that later in the year they will be in a position to accept orders. Steamers have entered very considerably into the trade. A number of Norwegian sailing vessels have also gone north to load with timber. At one time it was supposed to be a necessity to build sailing vessels to carry timber from British Columbia. With the advent of Norwegian ships, and particularly with the probabilities of the trade being done by steamers, the necessity for so doing seems to have passed away."

LUMBERING IN JAPAN.

Mr. Alex. McLean, Commercial Agent at Yokohama, Japan, sends the following to the Department of Trade and Commerce, Ottawa, regarding lumbering operations in Japan:

"The suggestion of Japan as a lumber market is usually met by reference to the timber and lumbering capabilities and opportunities of Hokkaido, meaning the northern of the main islands of Japan. It does not appear that any authoritative survey has been made, or that there are statistics available, of the timber wealth of Northern Japan. Occasional reports of operations there, however, if collected and pieced together, would give much needed information. For example, the Otaru Lumber Company, Limited, recently held their annual meeting, at which the net earnings were put at 40 per cent., and a dividend of 15 per cent. was declared, and a resolution passed to increase the capital from 1,500,000 to 6,000,000 yen.

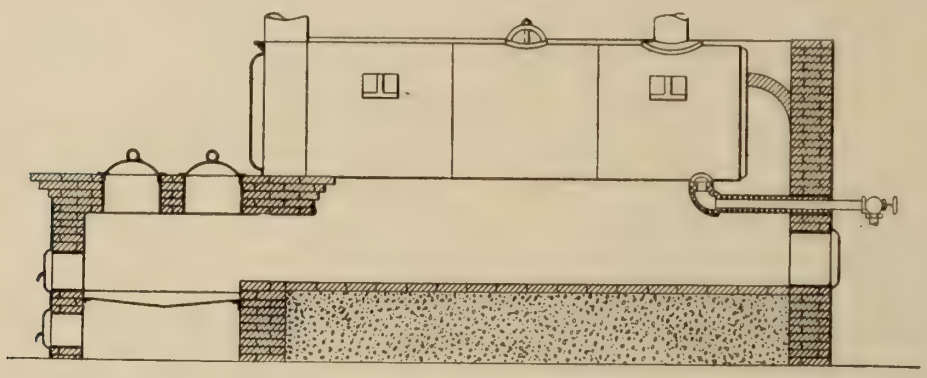
"From the report it is stated that 'the actual operations in the future, the immediate result of what is commonly known as the winter term covering the intervening months between November and April or May the following year, include 1,500,000 railway sleepers and 4,500,000 cubic feet of lumber, and of this lot 600,000 pieces of the former and 130,000 cubic feet of the latter have already been concentrated in a convenient locality, and with marked symptoms of a large demand in the near future a prosperous year is almost assured. Of sleepers, 1,200,000 pieces have already been booked, and of this quantity about one-half will be exported to Mexico, and the other to China.

"The forest area available in Hokkaido exceeds 4,000,000 cho (1 cho equals 2.45 acres), and the yearly lumbering of nearly 200,000,000 cubic feet cannot materially reduce its productive power, as these figures are based on the alternate cutting system extending over a period of one hundred years, and which is ample time for the full growth of the trees that are to replace those cut. Needless to say, the calculations are all the result of years of study and personal experience devoted to this industry, and the more we go into it the more are we convinced of the very bright future in Hokkaido."

Space is too valuable to fill with what sounds well, but what is receiving no attention from readers. That it is producing results or is not can be scientifically determined by the study of replies. Test this yourself.

BOILER SETTING FOR SAWDUST.

As shown in the accompanying sketch, the return tubular boiler setting which I have had some experience with, has proved to do a great deal better work without any bridge wall. You will get a fine combustion, that is, burning sawdust, and mill scrapings. We had trouble about keeping up steam and took out the bridge wall so there was about 4 or 5 feet clear under the boiler. This boiler is 6.5 by 15 feet and the engine 17 by 22 inches at 180 revolutions a minute, and can make plenty of steam for the engine, besides another small engine about 30 horse-power and four pump cylinders.—F. W. Noyes, in "The Engineer."



BOILER SETTING FOR SAWDUST.

ACCIDENTS TO BOILERS.

Both serious and minor accidents to boilers are happening every day. Many of them could be avoided. A certain steam plant was installed as illustrated in the first drawing, with three boilers, one of which eventually exploded. The boilers had been fired up and the water gauges indicated that the proper amount of water was in each Unfortunately some one who tested the boilers the day before had carelessly left the stop-cocks closed. The workmen should have looked over the apparatus before they left the plant, and certainly the fireman should have examined the cocks before he fired up. But he had fired many times before without testing the gauges, and took it for granted that all was well, as usual. The water was retained in the gauges, and no water was in the middle boiler, which heated up good and hot. The steam valves of the main line, over the boilers, although closed, leaked badly.

This illustrates how easily conditions may fool a man who is not unusually alert. Some of the best firemen and engineers get caught this way occasionally. They are often rushed in the early morning to get up steam so that the works can start full blast by 7 o'clock. In the darkness and hurry it takes a very conscientious man to examine into all the little details. In the above case the results were very disastrous. Suddenly the steam shot out of the door and ash pit of the middle furnace. An examination afterwards revealed the burst plate just over the firebox of the middle boiler, marked A, Fig. 1. Some one had blown out the boiler, closing the valves on the water gauges, also the blow off, and had not refilled the boiler, in his haste or carelessness. The fireman was also to blame for not trying the gauges. The accident caused several days' delay in operations and the broken plate was substituted with a new one as shown in Fig. 2.

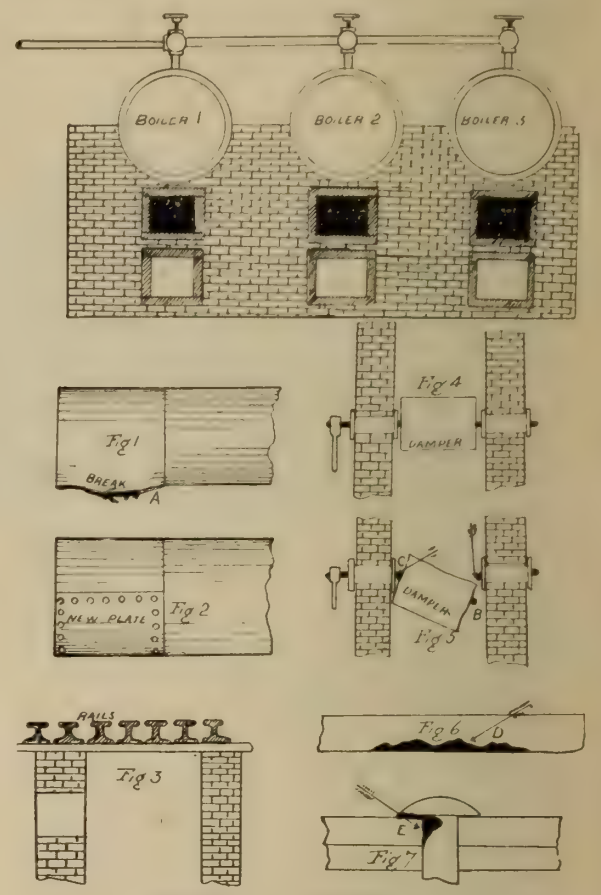
One does not have to tramp about the country much to find evidence of many reckless proceedings on the part of steam engineers and firemen. Manufacturers of up-to-date fire grates for boilers would be surprised if they were to count up the makeshift grates which are in use in really important positions. Old car rails are sometimes utilized for grate bars. The plan is shown in Fig. 3. The rails are cut to proper length and placed side by side on the firebrick walls, the engineer priding himself on having a pretty good thing.

Iron rails stolen from a road are cheaper than modern grate bars any time. But the engineer forgets the losses. He overlooks the fact that the draft is hindered, that the rails in their warped condition are letting good fuel sift through only partly burned. Such rigs are money-losers to a firm and a detriment to the work.

In one case a mill lost considerable money for a long period, due to the condition of the damper in the chimney. For months it had been giving trouble. It was operated on a steel shaft bearing which was fitted in iron journals set into the wall work of the stack. The shaft was fitted with the proper crank lever, and a chain extended from this down to a point near the level of the ground, where it could be operated. But the fireman was not able to get the proper draft. Weeks and weeks went by; the stack smoked and the fuel in the furnaces failed to burn thoroughly; great difficulty was experienced in getting up and maintaining steam. Finally it was decided to go to the trouble of examining the damper. Long ladders were obtained and adjusted against the chimney. An opening was made through the bricks, and the damper, which was originally adjusted evenly, as in Fig. 4, was found to be dropped down, as in Fig. 5, due to the breaking of the bearing at B. This bearing had gradually worn down, and, lacking lubrication of any kind, soon filed itself through and off. Hence the damper was supported solely by the remaining end C. This damper was removed and a new one put in, after which the draft was perfect.

At another place an explosion was caused by corroded plates, some of which were as badly corroded as represented at D, Fig. 6. In another instance the corrosion worked itself deeply into the hole near the head of a plate bolt, also cutting into the bolt, as at E, resulting in weakening the plate and allowing it to break.

Instances of this kind are numerous. Many such troubles occur in country plants, however. City plants are better kept and more up-to-date. More experienced engineers are employed in them as a rule; a new man usually strikes out for the country. Nevertheless, one may find some first-class establishments in the rural districts. Many a little hillside mill is operated by as neatly equipped engine and boiler rooms as one would care to see; while, on the other hand, this department of some great metropolitan works will occasionally be thoroughly littered up and extremely unhandy.—"Barrel and Box."



ACCIDENTS TO BOILERS.

SUCCESS.

A Kansas woman, Mrs. A. J. Stanley, of Lincoln, has been awarded a prize of $250 by a Boston firm for the best answer to the question, "What constitutes success?" She wrote: "He has achieved success who has lived well, laughed often and loved much; who has gained the respect of intelligent men and the love of little children; who has filled his niche and accomplished his task; who has left the world better than he found it, whether by an improved poppy, a perfect poem or a rescued soul; who has never lacked appreciation of earth's beauty or failed to express it; who has always looked for the best in others, and given the best he had; whose life is an inspiration; whose memory a benediction.

People get rich knowing to-day what somebody else will want to-morrow.

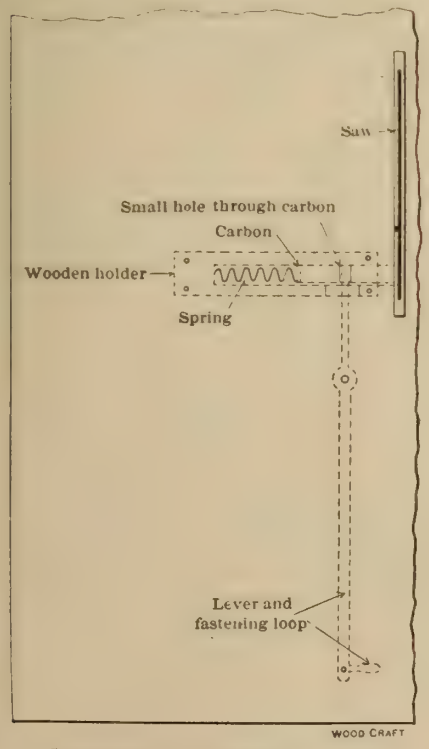
THE NOISE OF CIRCULAR SAWS.

By J. O. Barnwell.

I want to tell how I cured a loud singing noise caused by a small cut-off saw making thirty-five hundred revolutions. At first I thought the noise was caused by the air which the saw teeth ran through the narrow gap in the saw table, but on being informed by the chief of the department that it was a bell effect from the disc itself, I devised a surprisingly successful preventative.

The saw table is of wood and the device was made so as to harmonize with the table as well as to prevent other discord. I took a piece of wood, about 1 by 2 by 6 inches, and bored a 9-16 inch hole 4 inches deep in one end. Into this hole I put a spiral compression spring 2 inches long and of such a diameter as would allow it to work freely in the hole. Then I put a piece of common arc light carbon about 2 1-2 inches long on top of the spring, and nailed the block to the underside of the table in such a manner that the spring would press the exposed end of the carbon rod gently against the side of the saw. I took care to see that when the table was raised to its highest position, the carbon would not be beyond the circumference of the saw, or even so near the edge that the set of the teeth would interfere with it.

One difficulty I did not foresee. When the table was raised so that an operator could get at the working parts, the spring would shoot

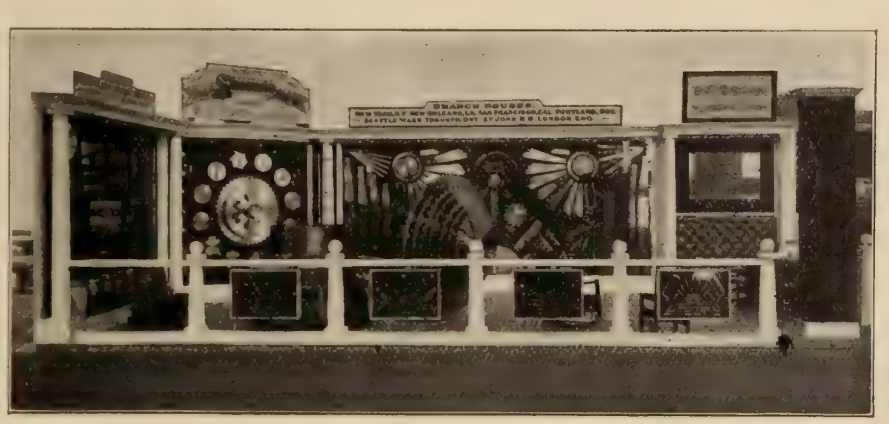


Improving the Circular Saw.

the carbon out of the hole like a pea out of a popgun. To prevent this, I cut a longitudinal slot in the wooden holder so that the short arm of a small lever could be inserted into a hole bored crosswise through the carbon. When it was desired to raise the table for any purpose, the lever was moved so that the carbon was held out of contact; the long lever arm being held in place simply by a loop of leather and a nail. When the table was again lowered, the loop was unhooked, and the carbon was of course sprung back into contact. The small amount of graphite in the carbon rod serves as a lubricant, and the saw does not wear in the smallest degree. On a saw with an iron table the same device could be used with appropriate modifications.—Wood Craft.

THE SIMONDS COMPANY AT THE JAMESTOWN EXPOSITION.

A feature of the exhibit of the Simonds Manufacturing Company at the Jamestown Exposition is the educational part. Comparatively few people have any particular idea as to the methods used in making steel.



Simonds Saws at Jamestown Exposition.

The Simonds people show the crucibles in the different stages of melting, the ingot after it has been poured, then the different stages of rolling, until at the end a finished saw appears, showing the different processes which are necessary in order to obtain a Simonds saw made out of Simonds steel.

The display booth is built in colonial style, with white enameled woodwork. It measures 19 feet deep and 32 feet long. Signs across the top of the booth show names of the company's branch houses and pictures of their factories at Fitchburg, Mass., Chicago, Ill., and Montreal, Que.

There is a gentleman in attendance at the exhibit at all times, and the Simonds Manufacturing Company invite customers, friends, and particularly training schools, to visit their exhibit and note their various lines of manufacture, the different kinds of saws, knives, files, hack saws and frames, etc.

They further invite visitors to make their headquarters at the Simonds space, where any courtesies will be cheerfully rendered. A desk and chairs are provided for the use of visitors, who may wish to write letters, and all are cordially invited to make the Simonds exhibit their headquarters while at the Exposition.

THE LATE J. W. MAITLAND.

After an illness of a fortnight as the result of heart trouble, Mr. James W. Maitland, of the well-known lumber firm of Maitland, Rixon & Company, of Owen Sound, passed away on June 30th. Death was not unexpected, as for the past two years Mr. Maitland had been at time an acute sufferer.

Mr. Maitland was in his fifty-fourth year, the eldest surviving son of the late Thomas Maitland, and was born in Owen Sound. He received his education at the public and grammar schools there and afterwards became identified with the shipping business of the port. For a number of years he was purser on the Smith & Kelley steamers. While in this capacity he formed a partnership with Mr. Henry Rixon, forwarders and commission merchants, and did a large business for many years. Getting in touch with the lumber business, this firm was extended to include Messrs. John Ainslie and William Stoddart, and the lumber mills on the peninsula were purchased. Later the fine mill property on the east side of the bay was secured and the firm devoted its attention exclusively to the lumber business. Last year the extension of the mills was Mr. Maitland's chief anxiety.

Mr. Maitland took a large interest in Owen Sound affairs and might have filled any position in the Municipal Council had be consented to accept. He was a member of the Board of Trade, for many years in succession a member of the Council, and vice-president and president of that body in consecutive terms. He was a member of St. George's Church, and though he took a large interest in politics and was nominally a Liberal-Conservative, he took an independent view. He is survived by a widow, two daughters, and one son.

THE MILL MAN'S PLAINT.

A farmer sold a load of wheat,
And bought of boards three thousand feet.
In eight short years he came again
To buy some boards and sell some grain.
But when he heard of boards the price,
He said some things that were not nice.
He told the dealer 'twas a fright,
The way he'd shoved things out of sight.
And then to arguing they went
But could not reach a settlement.
They argued through the sunset red
Till other folks were tucked in bed.
They argued through the weary night,
They argued through the morning light,
And still these two could not agree
Just what the price of boards should be.
'Twas all because the farmer thought
That boards and studding should be bought
At prices paid in ninety-eight
With wheat priced at the present rate.

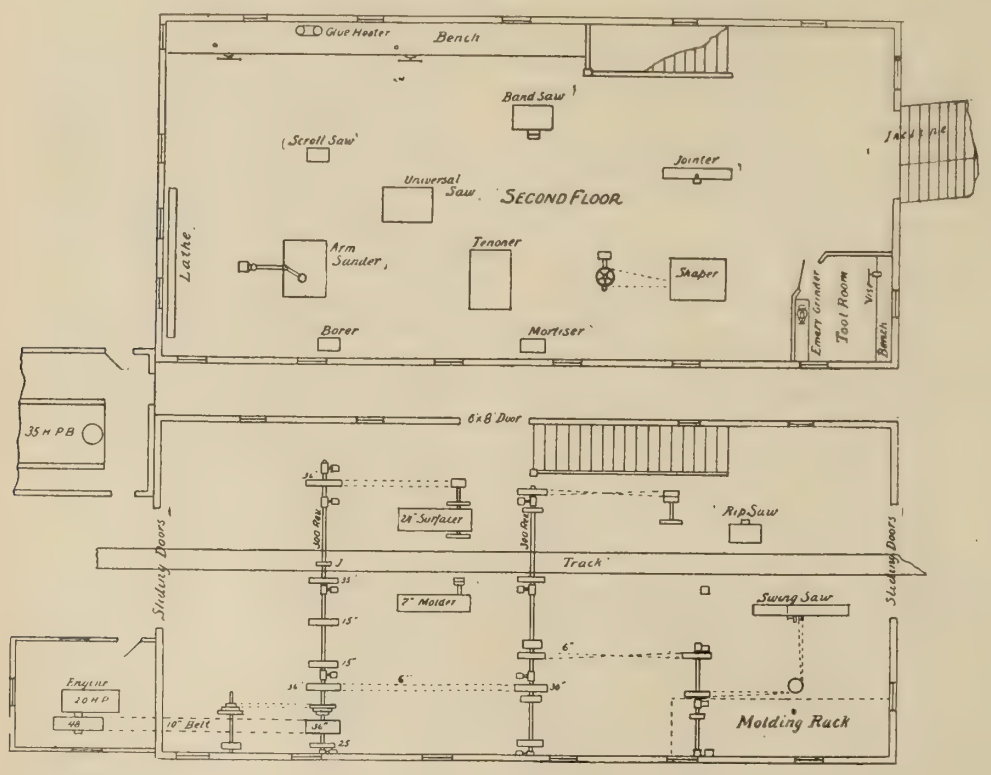
TO TIMID ADVERTISERS.

"If you wish in the world to advance,
Your merits you are bound to enhance;
You must stir it and stump it,
And blow your own trumpet,
Or, trust me, you haven't a chance!"

THE Wood-Worker and Retailer

A COUNTRY PLANNG MILL.

We give herewith a sketch of our new planing mill—a real country mill—thinking it may interest, and possibly aid, some of "The Woodworker's" readers, just as we have been helped by reading its valuable contents. We planned and built this mill, figured the speed of all machines, put up the shafting, and belted up all around, before we started, and haven't had to change a thing and have had practically no trouble at all, though we have now been running about a year. All our machines are new and of the best models. We run all these machines with a 20 horse-power engine and a 35 horse-power boiler. When only four or five of the heaviest machines are at work it requires about 60 pounds of steam. —Gates Bros, in "The Woodworker."



A Country Planing Mill.

FLOORING.

By Dwight L. Stoddart.

The first finished floor I ever remember much about was laid over rough lining. This finished floor was maple, and what we might call 1 by 4, though in the dressing it was a little scant both ways. The lumber that went into the floor grew on the same farm where it was laid, and as it was some distance in that day to take it to a mill to get it tongued and grooved, it was laid without, secret nailed in one edge and nailed down through the flooring at the other edge. That might seem a very queer way now, yet after all about the only difference now is all the nails go through many of the finished floors of to-day, as probably a very large majority of the parquette floors of to-day are not tongued and grooved.

Fig. 1 illustrates the heaviest floor I ever laid, which was grooved and not tongued, as most of the flooring in that is over 2 inches thick. After a flooring is laid a regular parting strip same as is in windows is put in, which makes the groove turned into a tongue, so to speak. These kind of floors are used in warehouses and places where great strength and wear is required, and the idea of a groove without a tongue is simply to save lumber, as on lumber 3 or 4 inches thick it would make a great saving.

Fig. 2 is the most common style of flooring made. I have shown here, drawn full size, though it will probably appear in the paper about half size, the 2 by 6, 1 by 4, and the little tongue and grooved parquette, all in the same illustration. You will notice the parquette is tongued and grooved on the end same as the edge, and much of the 7-8 flooring is also at the present day.

If I should ask what is most needed to lay floor, some would probably say a hand axe, others a hatchet, while the parquette floor man would probably say a small hammer. Often a big mall is required on large heavy flooring. It, of course, takes different kinds of tools for the different kinds of flooring, so it might be hard for all to agree on what was the most needed, yet I would say, and I believe you will all agree with me, that what

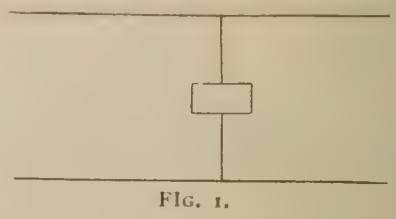


Fig. 1.

is most needed is a good back

In fact, good backing is necessary in any business. But the main thing necessary in laying floor is to keep it perfectly straight, not only up and down, but edgeways as well.

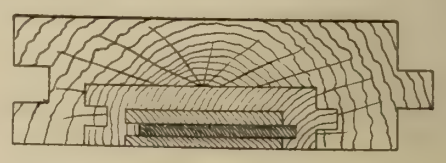


Fig. 2.

Some might think it must always be driven up tight, and if it is, how can you help whether it keeps straight or not, but you can, nevertheless, and you should always bear it in mind and continue to watch it and drive up hard any prominent places and it's an easy

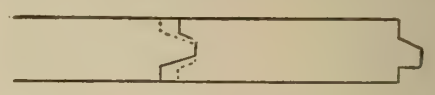


Fig. 3.

matter to keep it perfectly straight; and on the other hand it's an easy matter to get a crooked and poor job if you just keep hammering away and never stop to see how it's coming, and you should keep from pounding

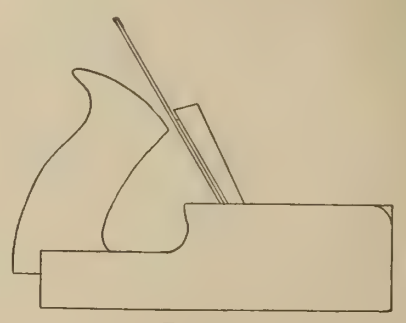


Fig. 4.

and bruising up the tongue so that the groove of the next board will not enter, and the hammering, possibly by a miss, lick the edge of the flooring above the tongue, trying to drive

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H. P. ECKARDT & CO.

Wholesale Grocers - - - TORONTO

the nail clear down solid in the corner of the tongue.

Fig. 3. To overcome this last difficulty they have invented a tongue and groove like I show in the dotted lines. The nail can be driven easily right down on the face of the slanting tongue. The solid line, possibly, shows even a better way. This kind, the nail would be driven in the bottom groove and the floor would be laid right backwards from the usual way, but while these are a great advantage as far as driving the nail is concerned, and they make a good job when first laid by being slanting, they would come quite loose as soon as the floor would shrink. Therefore, everything considered, I hardly think they will ever invent any form that will answer the full purpose of the old-fashioned tongue and groove, though I will admit it may be that we will learn that a little bevel on the top of the tongue may work to an advantage, and as the bottom is not beveled, it will have a tendency to hold the flooring in place even if it does shrink and the top part of the groove is loose.

Fig. 4 illustrates the best tool I have ever owned to smooth floor with, which is a little plane I made when a boy. Now, it's not because I made it when a boy that makes it the best, or because I made it so nice, or anything of that kind. The only secret there is to it, the bit is set at a greater pitch and it makes it, really you might say a half-breed between a real plane and a scraper, which allows it to be easily held without stuttering, as the scraper often seems to do, and make waves in the floor that take much hard work to get out, and, in the hands of the inexperienced, only to get them out to have it vibrate again worse, perhaps, than before. Again, this plane can be used after the first keen edge is worn off, and makes it seem to hold an edge much longer, and it works so much like a scraper that there is no danger of getting the wrong way of the grain and have it tear up. —"Woodworkers' Review."

James M. Hillis, of Vancouver, has been appointed official log scaler for the Provincial Government, his term of office to date from the 1st of May last.

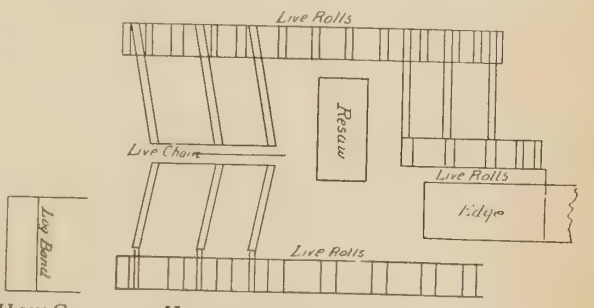
Messrs. W. C. Edwards & Company, of Rockland, Ont., have Mr. R. Savage as their representative in Western New York, Pennsylvania and points in Western Ontario.

RESAWS VS LOG BANDS.

Regarding the use of band resawing machines in saw mills, says a writer in "The Woodworker," my experience has been very much in their favor. In one mill where I was sawyer four seasons, we had such logs at times that I am confident the mill would not have cut enough to pay expenses had it not been for the resaw. Nothing equals this machine for sawing poor planks that are sprung. A 4 inch flitch that would make a 1 inch board and a 3 inch plank when handled by the resaw, would have to be skinned off on each side if cut up on the big mill, wasting whatever was cut off and getting a 2 inch or 2 1-2 inch plank out of it, to say nothing of time wasted. Then, in small timber, giving three or four cuts at a time to the resaw runs up the cut faster than the big mill could do alone in proportion to number of men employed and their wages.

We are using this winter a 7 foot resawing machine, using 10 inch saws, and it certainly makes good lumber rapidly. On this machine the rigid rolls are moved by hand lever, the others being worked by a steam cylinder, the steam acting as a cushion. The rolls open to take in a 12 inch cant. These cants are of course not very thick, being hearts from 3 to 6 inches. A flat chain 6 inches wide carries the lumber to the resaw. This chain runs in a trough 14 to 16 inches wide and 12 inches deep, the lumber tipping up on edge as it drops over. The lumber skids, with chains, are inclined up to the trough. There are carriers on both sides of the trough, with live rolls, to bring the cant back to the resaw again, keeping a string going each way.

Then, again, the log mill, when cutting



How Cants are Handled from Band Mill to Resaw.

good logs, has its advantages, since you can see just what you have all the time. I know from experience that there are more poor planks in cutting double for the resaw than than there would be cutting single, especially in hardwoods. And, too, the lumber doesn't spring so much cutting single as when cutting two, three or four cuts at a time. The log has to be well forward, so the back end is at the block, or the stock will come out all shapes —this more so in beech and such timber.

Fine Circular Mill Outfit For Sale

Boiler, Automatic Engine, Stearns fractional set works, opens 44 in. Rope feed, six saw edger, log turner, pulleys and shafting, bull wheel, etc. Write for particulars to

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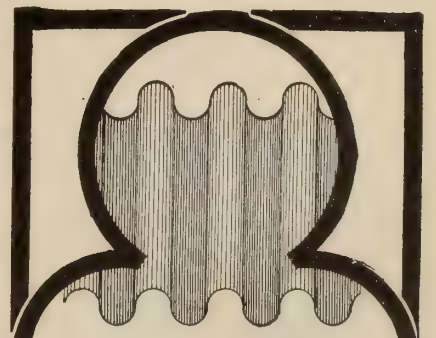
A professional well trained forester (College and Forest Academy absolved) with practice and experience of many years in administrating forests, well acquainted with lumbering valuation surveys, the uses of commercial trees, preparations for working and planting plans, etc., as well as forestical bookkeeping, transaction and correspondence, and financial office work, offers his service to private owers of forests, lumber manufacturers, railroad companies, etc. Best references and certificates can be produced. Apply to

C. F. B., Edmonton, Alta., Can.
P. O. Box 219



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TORONTO, CANADA.

THE NEWS

ONTARIO.

Lloyd & Buchanan have made a proposition to the ratepayers of the town of Alliston to locate their door factory there.

The Laidlaw-Ainslee Lumber Company have purchased a site at Hamilton, and will erect a modern office furniture factory.

Mr. J. Gray, who operates a lath mill at Peterboro', has acquired property adjoining his mill with a view to enlarging same.

The ratepayers of Blyth have defeated a by-law to loan $3,000 to Mr. E. Livingston to erect a factory for the manufacture of handles, hoops, etc.

Irish & Scott's saw mill at Maxwell has been destroyed by fire. Insurance amounting to $1,000 was carried, but this will only partly cover the loss.

J. H. Fairbank, Petrolia; W. D. Lummis, Toronto; J. H. Kittermaster, C. O. Stillman, F. F. Pardee, all three of Sarnia; and J. B. Pardee, of Sault Ste. Marie, have been incorporated as the Ontario Timber & Land Company, with head office at Sarnia. Their authorized capital is $100,00.

The saw mill of Kennedy & Davis at Lindsay, which was entirely destroyed by fire some months ago, is to be replaced by a modern two storey brick building, 60 by 72 feet. The business in the future, however, will be practically owned by Mr. Kennedy, the Messrs. Davis having withdrawn.

As a result of negotiations with the Temiskaming & Northern Ontario Railway Commission, Mr. J. R. Booth, the well-known lumber manufacturer of Ottawa, is to construct a private siding at Latchford for the accommodation of cars carrying supplies for the working of his pulpwood concession on the Montreal River.

The Canada Gazette recently contained notice of the incorporation of the Strong Lumber Company, Limited, Toronto. This company, which is capitalized at $200,000, includes the following incorporators: T. Strong, Ogdensburg, N.Y.; George Gordon, Sturgeon Falls, Ont.; H. J. Bartlett, Orillia; W. Foster and H. Vigeon, both of Toronto.

THE EASTERN PROVINCES.

Daigle & Frere, saw millers, St. Flavien, Que., have registered.

Paige & Rowell, lumbermen, Compton, Que., have registered. W. W. Paige and T. Rowell are the principals.

The Canada Woodenware Company, formerly of Hampton, N.S., are considering a proposition to locate at Halifax.

The Dalhousie Lumber Company, whose mill was recently destroyed by fire at Dalhousie, may locate in Campbellton. They have leased the Purvis mill for one year, where they will employ about forty hands. They will also have a portable mill in operation on the site of the old one in Dalhousie.

The Sable Lumber Company, of Liverpool, N.S., will build a six mile line of railway from Lake Wilkins Siding to join Tidney Lake, and conemplate tapping the H. & S. W. line.

Manager Bliss, of the St. John River Log Driving Company, New Brunswick, will this season make his trips over the company's boom limits in a swift gasoline launch. In former years the manager of the booms made his trips within the boom limits by means of horse and wagon, but it is felt that under the growing conditions a fast launch will be of greater advantage.

MANITOBA, SASKATCHEWAN AND ALBERTA.

Mr. S. A. Arbuckle has purchased the lumber business of Mr. W. W. Ireland, of Wellwood, Man.

Mr. R. H. Ormond, lumberman, Pincher Creek, Alta., has been succeeded by Ormond & Alexander.

Cowan, William & Company, lumber dealers, Rosthern, Sask., have sold out to Mr. W. B. Bashford.

Mr. D. C. Corbitt, lumber dealer, Lashburn, Sask., has admitted Mr. O. H. Price as partner in his business.

A saw mill having a capacity of twelve thousand feet per day has been established at Lac La Nonne by Mr. Stiffes, of Morinville, Alta.

The S. A. Tolfthagen Lumber Company, Limited, Daysland, have taken over the lumber business heretofore carried on by Mr. T. L. Tofthagen.

A. P. Burns, Medicine Hat, Alta., is adding another building, 20 x 40 feet, to his planing mill. A lot of new machinery, including a sandpapering machine, a planer, a shaper, a tennoning machine and a mortiser, will be installed.

Mr. William Oliver, lumber dealer and owner of a planing mill at Lethbridge, Alta., is contemplating a large extension to his business, and proposes to erect a two storey brick factory about four times the size of his present one, which will turn out everything in the shape of wood that goes into making a building. The factory will be built this fall, and the machinery installed during the winter.

The City of Calgary has been chosen as head office of the United States & British Columbia Timber Company, Limited, which has recently received a Dominion charter. The authorized capital is $2,500,000, and a very extensive business is apparently contemplated. The company will not only handle all kinds of lumber but will also carry a large stock of builders' materials.

BRITISH COLUMBIA.

Flummerfelt & Sons, saw mill owners, New Westminster, have dissolved partnership.

Messrs. McWhinney & Lewerke, proprietors of logging camps at Port Neville, logged two phenomenally large trees recently. The trees were fir and yielded four logs each which scaled forty-two thousand feet board measure.

Fire, which broke out early Saturday, July 6th, destroyed the dry kilns and sheds of the Robert McNair Shingle Company at Hastings.

A company known as Roe & Abernethy, Limited, has been formed under the laws of British Columbia to take over the assets of the former partnership of Messrs Roe & Abernethy. The company's head office is at Port Moody, B.C.

The Vancouver Lumber Company have forwarded a cheque for $200 to the chief of the Vancouver fire brigade, in recognition of the good work of the brigade at the fire which occurred in the company's mill about a montth ago.

The Imperial Shingle Company of New Westminster have installed a new drag saw rig at the mill for the purpose of cutting up cedar logs into shingle bolts. They are running at present under double shift, turning out about 170,000 shingles per day.

Messrs. Meredith & Gibson, capitalists, have purchased a block of stock in the Anglo-American Lumber Company, Limited, of Vancouver, the amount involved being in the neighborhood of $60,000. Local reports to the effect that these gentlemen had purchased the plant outright are not true.

The Adams River Lumber Company has been incorporated with a capital of $50,000. Messrs. Lamers, of Stillwater, Minn., and J. P. McGoldrick, of Spokane, are the promoters of the new company. An up-to-date mill of large capacity will be constructed at once on Shuswap Lake to cut the timber on the large holdings of the company on Adams River.

A party recently visited Vancouver, consisting of Mr. D. P. Cutten, secretary of the Red Wood Lands & Investment Company, and Messrs. E. W. Webster and H. B. Switzer, of Eureka, Cal. It is understood that these gentlemen intend erecting a large sawmill on Burrard Inlet. They have under option a tract of timber.

The Emerson Lumber Company, of Port Moody, B.C., have installed a new inside moulder and increased the planing mill power plant by the installation of a 16 inch by 20 inch engine, replacing the one formerly in use. The new moulder was made by the

Saw Mill at Rainy Lake, Ont. Yards and Planing Mill at Hamilton, Ont.
THE
M. BRENNEN & SONS
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HAMILTON, CANADA

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CELEBRATED GOUROCK TENTS

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The Gourock Ropework Export Co., Limited
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S. A. Woods Company, and the engine by Houston, Stanwood & Gamble, of New York. They have also erected a 42 x 50 dry lumber shed.

A new company has recently been formed and incorporated by the Provincial Government, to be known as the North Arm Lumber Company, Limited. The capital, which has been furnished by Californians and New Yorkers, is fixed at $150,000, and the provisional board of directors consists of: R. H. McKee, Vancouver, president; H. L. Armstrong, Pomona, Cal.; W. A. Kennedy, Vancouver; Captain Magneson, Vancouver; H. O'Neill, North Dakota. It is said that the construction of the company's mill, which is situated on the North Arm of the Fraser River near Eburne, will commence shortly.

The Imperial Shingle Company, Limited, is the name of a new company that is building a plant on the south side of False Creek, Vancouver, B.C. All arrangements, regarding the obtaining of the timber limits, mill site and machinery, were carried out by the firm of Leslie & Crawford, timber brokers, of Vancouver. The mill is being equipped with four Johnson-Schaake shingle machines, purchased through the Western Oil Supply Company, Vancouver. The mill will have an annual capacity of about 400,000,000 shingles. The officers of the Imperial Shingle Company are :President, R. J. Crawford; secretary-treasurer, Ronald Leslie; manager, Z. Giberson.

One of the recent visitors to Vancouver was Mr. Chas. E. A. Olsen, of San Francisco, California. Mr. Olsen is the inventor and sole manufacturer of a mechanical commodity, namely, the "Acme" pulley covering, which he applies directly to the face of iron, steel, paper or wood pulleys, to prevent belts from slipping without the use of so-called "belt dressing" compounds. Mr. Olsen's twelve years of practical experience with belted power transmission has taken him to many parts of the world, having successfully served the largest power interests in the United States, Mexico, the British and European countries.

The Wood-McNab Lumber Company, Limited, will erect a new mill, about three and a half miles from Fernie, B.C. The plant has been ordered and will be on the ground by October 1st. The mill will be the most modern that can be installed, cutting from 40 to 45 thousand feet per day of ten hours, and with the most improved facilities for planing, dressing and finishing the product. The C. P. R. are putting in a spur line at the point selected for a mill site. The following gentlemen are the stockholders of the Wood-McNab Lumber Company: Messrs. V. Hyde Baker, of Cranbrook; C. D. McNab, of Waldo; A. B. Trites and R. W. Wood, of Fernie. The head office of the company is at Fernie.

The longest logging railway ever built in British Columbia is to be constructed this summer on Theodosia Arm by Mr. Thomas Merrill, a millionaire lumberman of Duluth, who has extensive holdings of timber on this coast. The building of the railway, which will run from the coast sixteen miles inland, will be carried out under the direction of Mr. J. Chisholm, who accompanied Mr. Merrill to Vancouver. The limits to be opened consist of half a dozen Crown-granted properties, carrying some of the very finest fir in British Columbia. The timber cut from these claims would be exportable only under the $1 tax, and it is not believed that much of it will be sent out of the country in an unmanufactured state.

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Penstock 18 ft. diam. 1¼ miles long erected for the Ontario Power Co., Niagara Falls, Ont.

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WE ARE FULLY EQUIPPED FOR THE MANUFACTURE and erection of Steel Pens ocks, Steel Smokestacks, Smoke Connections, Steel Tanks, Refuse Burners, and all manner of Steel Plate Work.

With the combined facilities of our Sherbrooke and St. Catharines Works we are in a position to handle a large volume of this class of work and to handle it with dispatch.

Estimates promptly and cheerfully furnished. Correspondence invited.

Showing Penstocks in process of erection for the Spanish River Pulp and Paper, Espanola, Ont.

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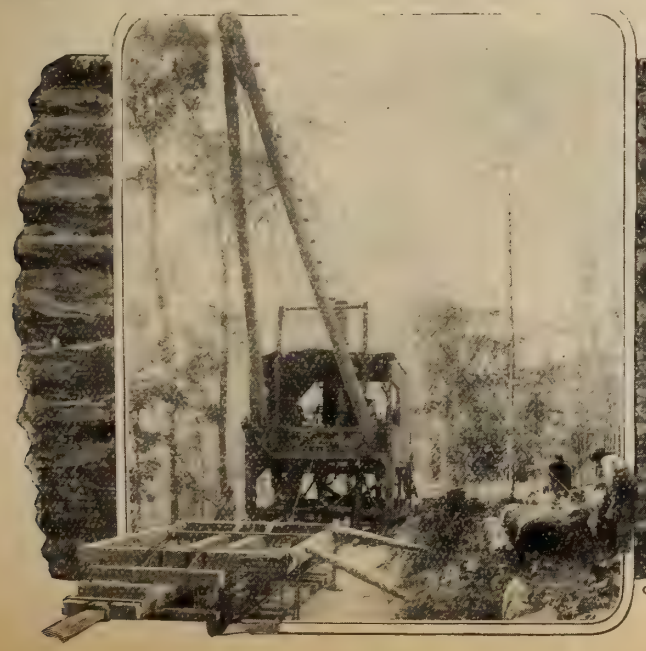
Plants: *SHERBROOKE, QUE, ST. CATHARINES, ONT.*



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¶ It can either move along the track with a car and pick up scattered logs, or it can stay in one spot and load a whole train, because it is self-propelling and independent under all conditions.

¶ It loads any kind of cars on any gauge track, and is a mighty good machine to pick up dollars for you, too.

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UNCLE SAM'S PULPWOOD.

The Washington Census Bureau has prepared a preliminary report on the consumption of pulpwood in the United States for the calendar year ended December 31, 1906, which shows that during that period 3,646,693 cords were used, as compared with 3,192,123 cords utilized in the previous year. This is an increase of 154,570 cords. The principal wood used in 1906 was domestic spruce, of which 1,785,680 cords were consumed. Classified according to methods of reducing into pulp, the mechanical process took 1,197,780 cords; the sulphite process, 1,944,136 cords, and the soda process, 504,777 cords. The figures cover the operations of 250 mills in 1906 and 237 in 1905.

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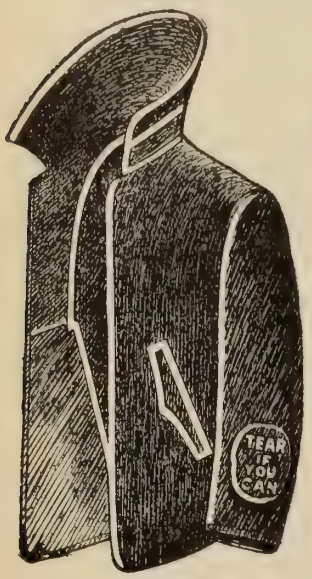

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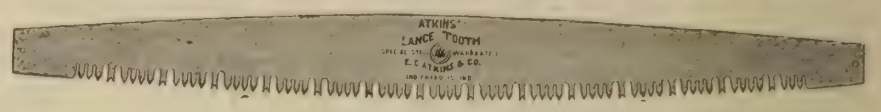

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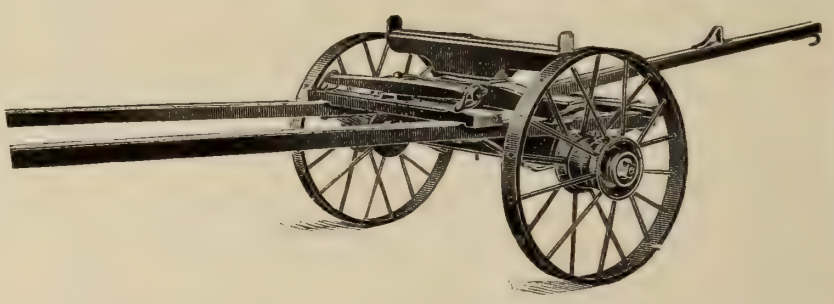

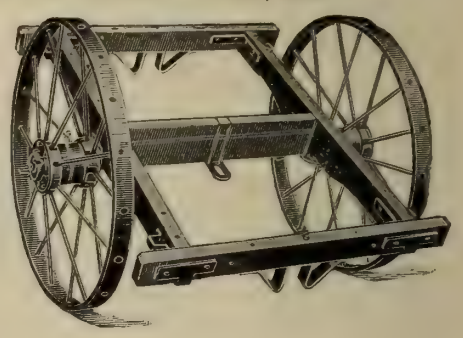

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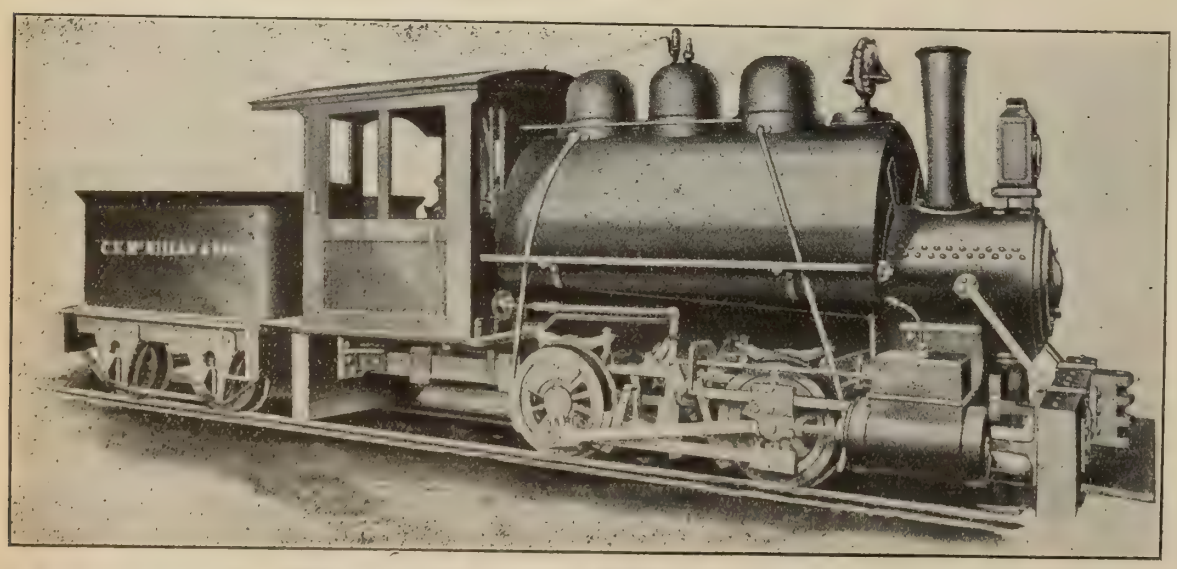

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WOOD PRESERVATION.

Among the innovations for preserving wood is one credited to a Frenchman and thus described: The pieces of wood, or posts, are dipped in a large tank of water, in which has been dissolved 10 per cent. of borax and 5 per cent. of rosin and carbonate of soda. Two electrodes are used, one on either side of the wood. The chemicals assist in the electrolysis and the water is a good conductor. The electricity is driven through the wood, forcing out before it all the sap and filling the pores of the wood with rosin and borax. The wood may be dried at once and by the next day has been fully preserved.

Mr. John Mather, a wealthy Ottawa lumberman, who died June 10th, left an estate valued at $691,000, all of which is in Ontario. The estates devolves on two sons and a daughter, with the exception of a few charitable bequests.

NOTES.

A recent issue of the British Columbia "Gazette" contained notice of the following incorporations: E. H. Heaps & Company, capital $1,500,000; McNair-Fraser Lumber Company, capital $200,000; Western Lumber Company, capital $25,000. The Columbia Lumber Company, of Portland, Maine, has been given registration as an extra provincial company, with L. L. Dickerman, Vancouver, as attorney.

The Canadian Pacific Lumber Company, of Port Moody, B.C., have installed one new boiler, 60 inches x 16 feet, made by the Patterson Boiler Company, of New Westminster, B.C., and one 250 horse-power engine, of the Robert Hamilton manufacture. They have also added one new Cowan planer and moulder to their planing mill plant and constructed two new dry kilns, and expect to put in additional boiler capacity in their saw mill in the near future.

The Sayward Lumber Company, of Victoria, expect to have the logging railway which they are constructing from Powell Lake on the mainland to salt water finished by September of this year. The company has 100,000,000 feet of timber in its tracts in the district of Powell Lake and the railway is necessitated by the fact that all attempts to log in this section have been unsuccessful owing to the current in the river and the number of falls encountered. The railway, which will be 8,000 feet long, will have a 12 per cent. grade. A thirty ton engine will be used to haul the loaded cars. In addition to this logging road there will be 400 feet of breakwater constructed to enclose a booming ground, and the limits will be logged for a distance of twelve miles back from the lake.

Mr. A. J. Burton, of the A. J. Burton Saw Company, Vancouver, returned last month from a trip to Toronto, Boston and New York, where he went in the interests of his company, purchasing machinery for the new addition to their plant. Speaking of his trip to THE CANADA LUMBERMAN representative, Mr. Burton said: "I have placed an order in New York for hydraulic pumps and flatteners and saws which will stand a working pressure of 160 tons. All the shops in the east are remarkably busy, and it is impossible to secure delivery before December. While on my trip I visited the Jessop Steel Company, of Washington, Pa., and spent one day with their Mr. Sydney Robinson, recently of Sheffield, England, who showed me the process of manufacturing steel from the raw Swedish iron bar right through to the crucible melting furnaces and the rolling mills, where the finest quality of saw steel is turned out. I arrived home to find business steadily increasing in volume, and the books full of orders, especially for band saws."

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Centre Crank, Heavy Duty, Throttling Governor Engines for quick delivery. One 15, one 20, one 25, one 30, one 40, one 50 and one 60 h.p.

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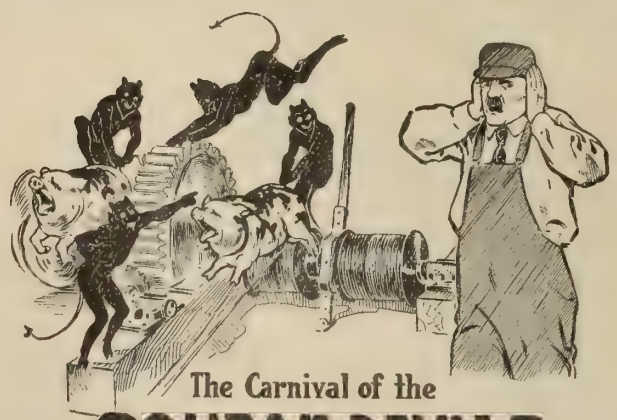

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Screw Cutting Lathe, 10 ft. bed 16" swing, very little used; in fine condition, a chance to secure good modern Lathe at a bargain.

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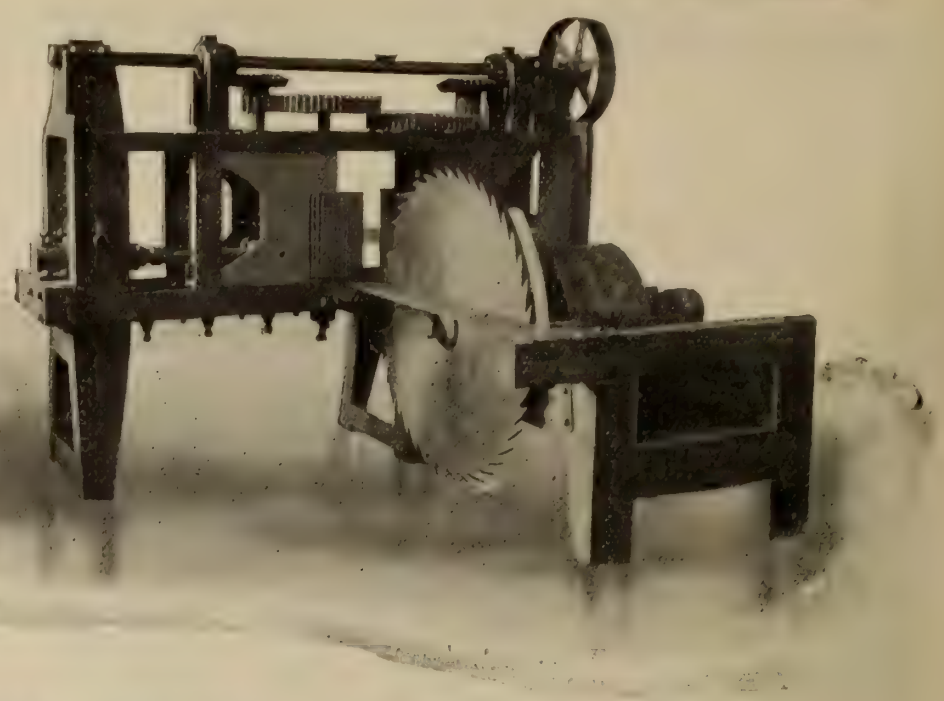

As can be seen by the engraving, the frame is cast in one piece. The legs of cast iron are cast in one piece with the saw bench. This makes an extremely substantial machine.

The feed rolls 12" diameter are driven by cut gears 16" in diameter. The proportions of the gears are such as to give a powerful driving mechanism.

The arrangement to set the stationary roll (not shown in the cut) is very accurate, quick and reliable. The clear distance between the slides is 19."

The steam press is of improved construction and has a travel of 10"

The saw is 42" and saw arbor bearing is set in slide so that saw can be brought closer to the rolls, as it wears.

The weight of the machine is 3,000 lbs.

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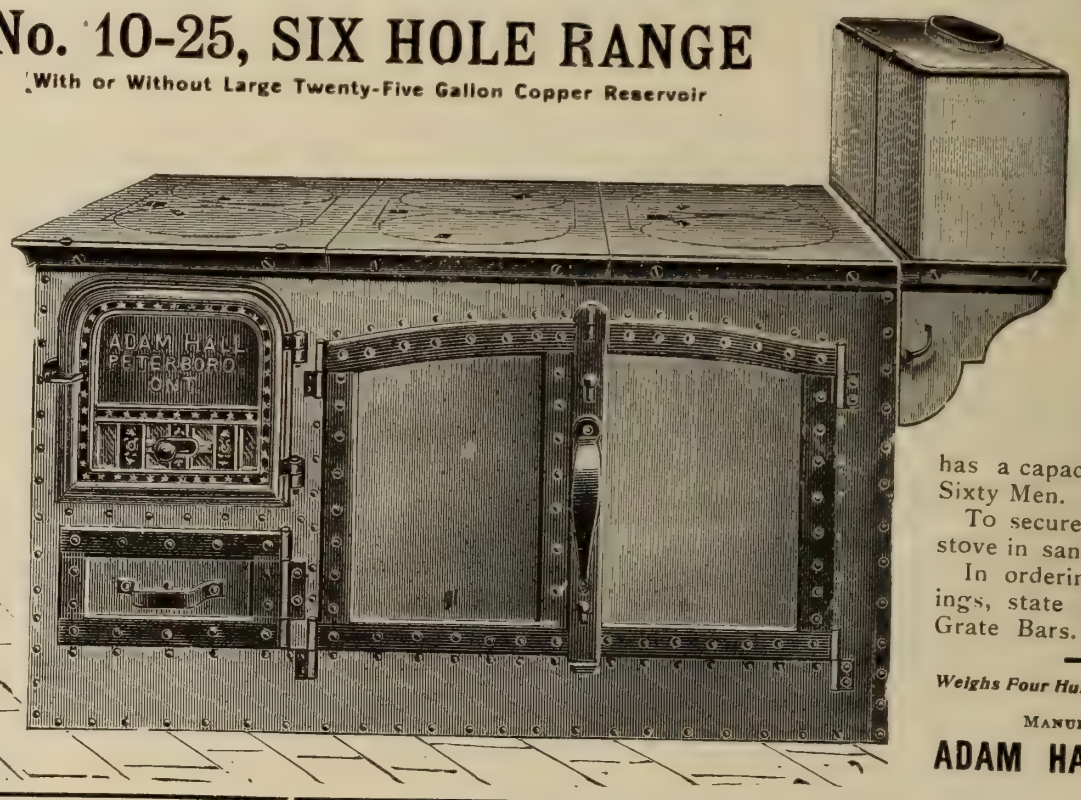
No. 10-25, SIX HOLE RANGE

With or Without Large Twenty-Five Gallon Copper Reservoir



Size of Top, 54 inches by 30 inches; Size of Oven, 24 inches wide, 28 inches deep and 16 inches high; Fire Box, 28 inches, —Wood.

This Range has the large Copper Reservoir and gives the full use of the top for Boiling purposes. It has a capacity to cook for Sixty Men.

To secure best results set stove in sand box.

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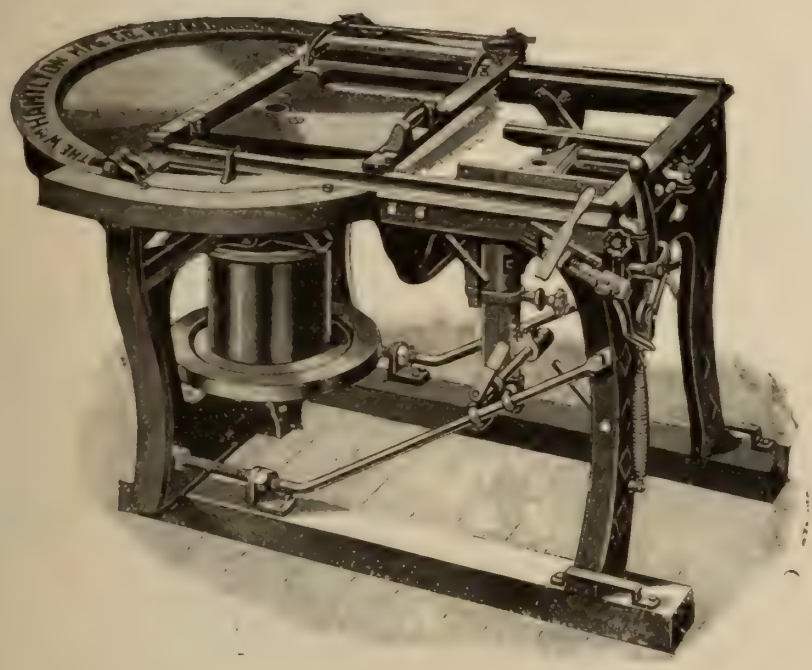

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We build everything for shingle mills. The cut shows our standard hand-feed horizontal machine.

With this machine a thick slab can be cut from the bolt and every shingle sawed riftwise A single motion of the hand lever lowers tilt table two inches or less so that a thick slab is cut off first cut and second cut is always a shingle.

It can be used either as a shingle, heading or box board machine.

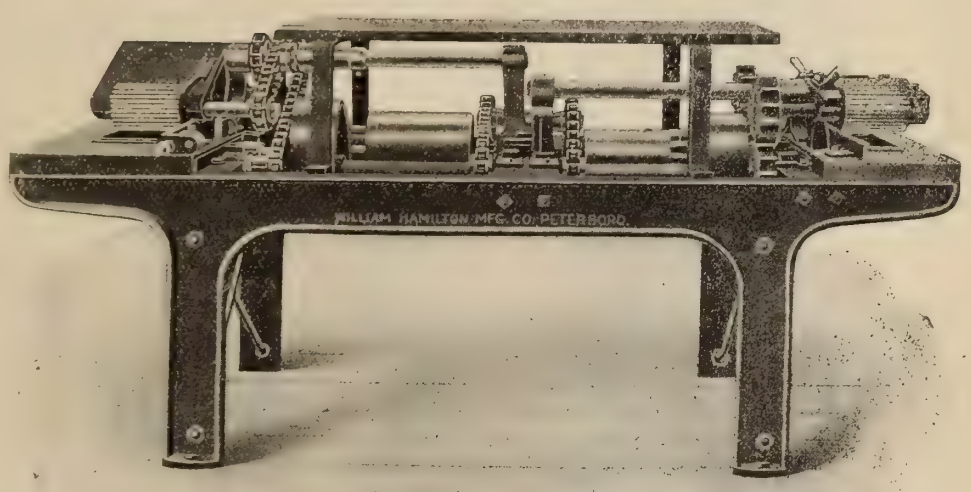
Will cut shingles 16″ or 18″ long.

This combined lath mill and bolter is pro bably the most handy and compact lath machine built.

It has a capacity of 60,000 lath per day when handled according to our instructions, and this is its normal day's work.

All the rolls are driven, giving it a strong and positive feed, and, with its heavy, well-braced frame, this machine will stand a great deal of hard work.

It can also be used for cutting pickets as well as lath and bolts.



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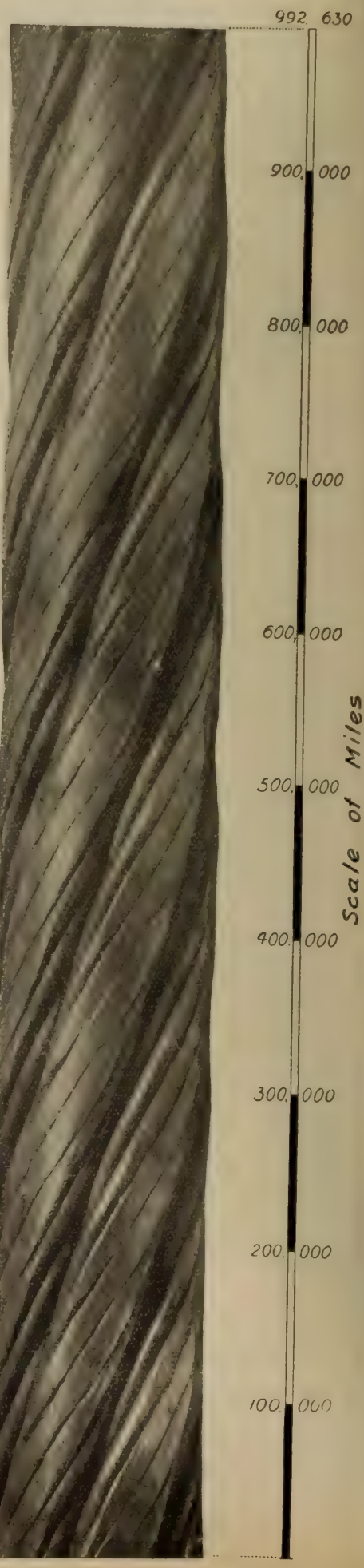

The two illustrations shewn are photographs of our record cable on the Glasgow District Subway; these traction cables are 36,300 feet long, 4⅝ inches circumference, and weigh 56 tons each, and are the largest wire ropes used anywhere in the world in a single length.

12 of Smith's Cables have given a total mileage of.....	**992,630.**
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Shewing an excess in favor of Smith's Cables of.....	**69·1%.**

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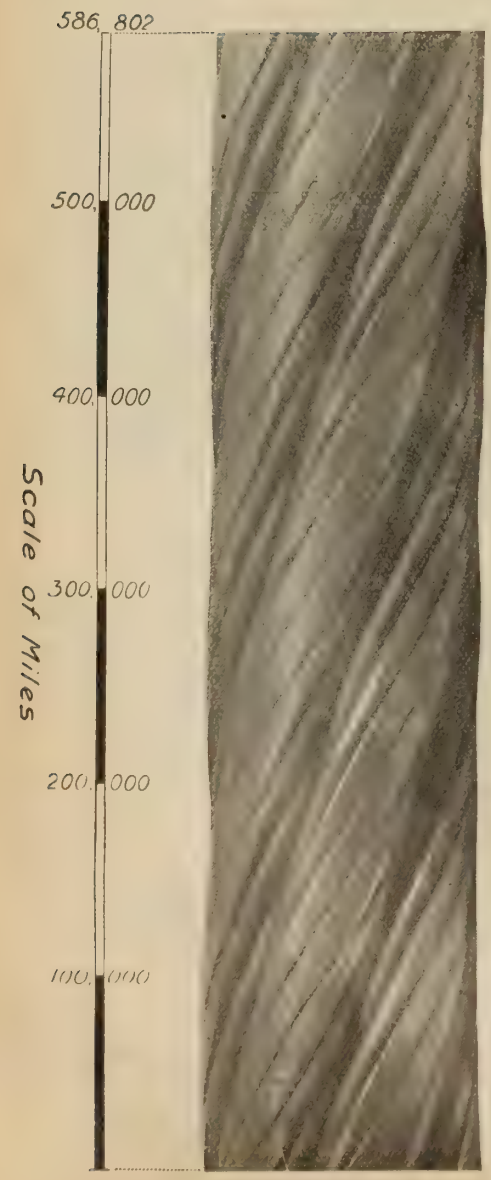

The height of this rope represents the total mileage of 12 cables supplied by various makers to the Glasgow District Subway Company.

The height of this rope represents the total mileage of 12 Smith Cables supplied to the Glasgow District Subway Company.

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Mince Meat put up in 75 Pound Tubs. ½ Barrels about 300 Pounds.
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See that this Name is on your Swage.

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This Name on the Swage is your Guarantee.

Simple in Construction, Easy to Adjust, Strong and Durable.

The Hanchett Adjustable Swage will swage any size or gauge of

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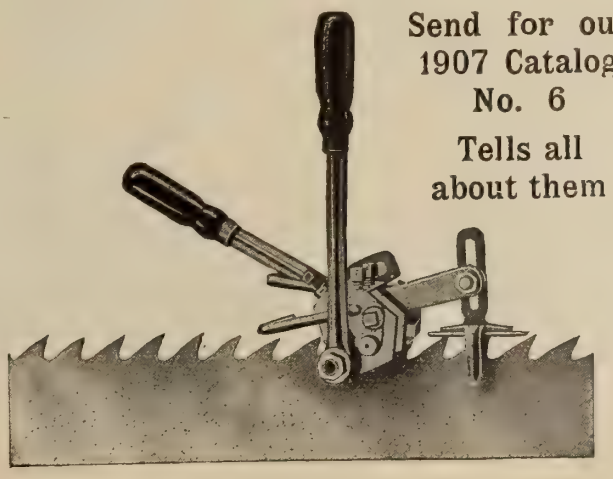
Every Swage manufactured by the Hanchett Swage Works is thoroughly tested and Positively Guaranteed to give Satisfaction.

Swage your Saws with the Hanchett Adjustable Swage; it will lengthen the life of the Saw, and enable you to make better lumber and more of it.

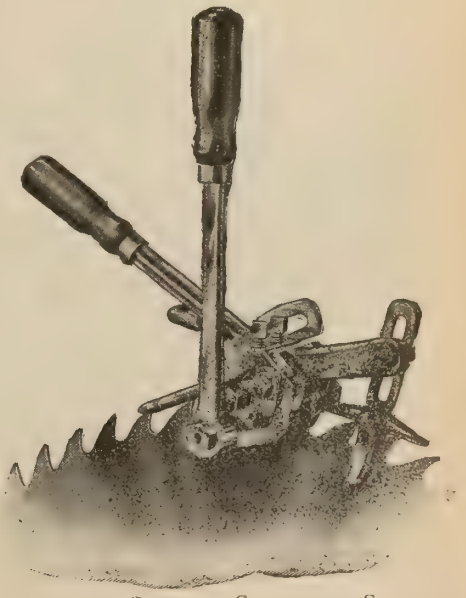
HANCHETT CIRCULAR SWAGE WITH BENCH ATTACHMENT AND JOINTER (STYLE D).

We also manufacture Complete Filing Room Equipment

Send for our 1907 Catalog No. 6 Tells all about them



HANCHETT BAND SAW SWAGE.



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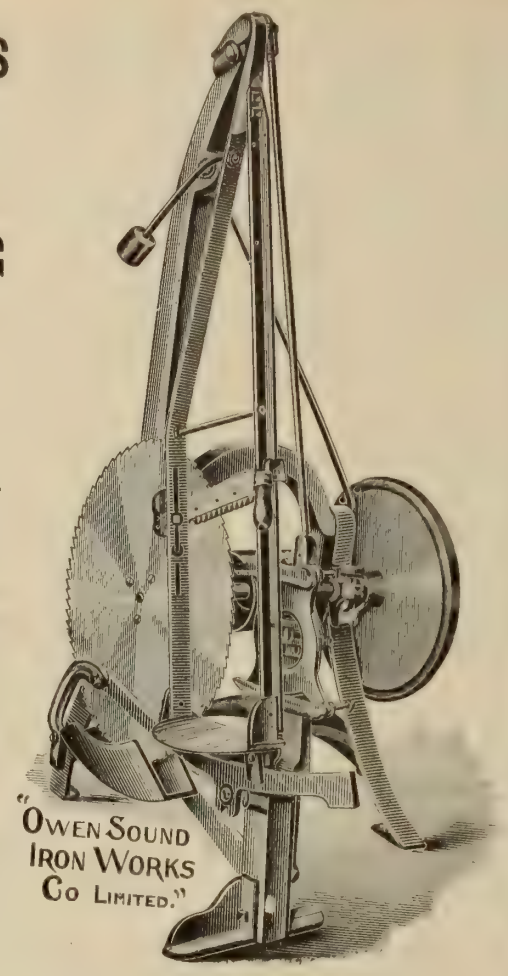

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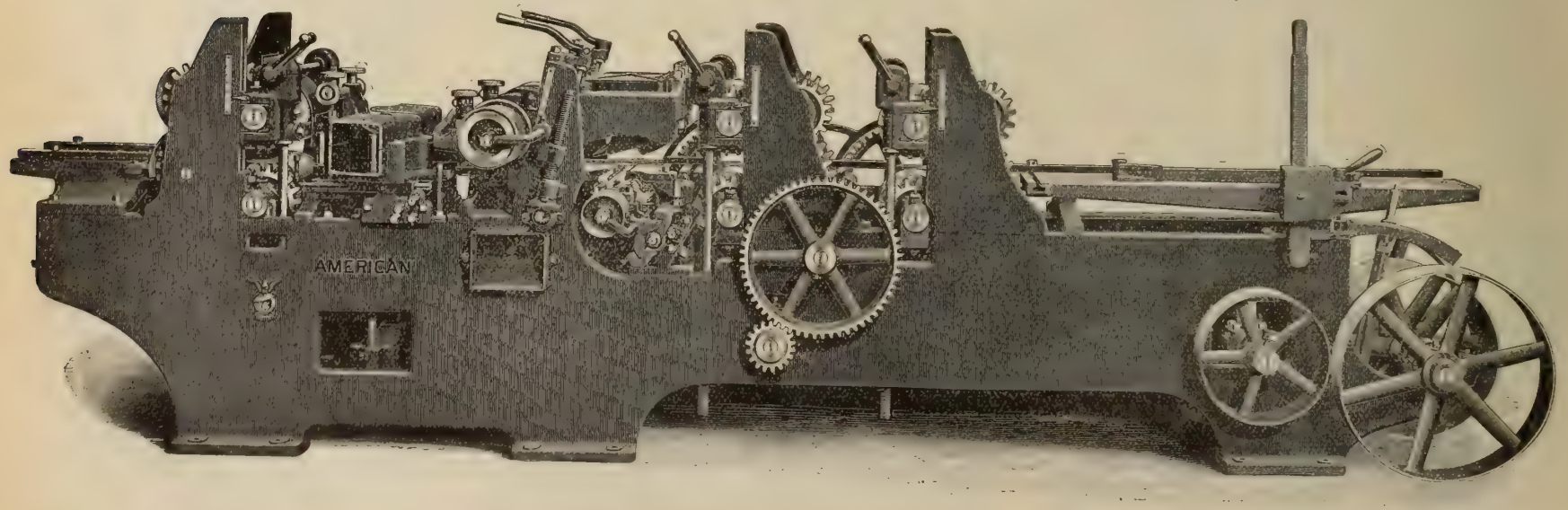

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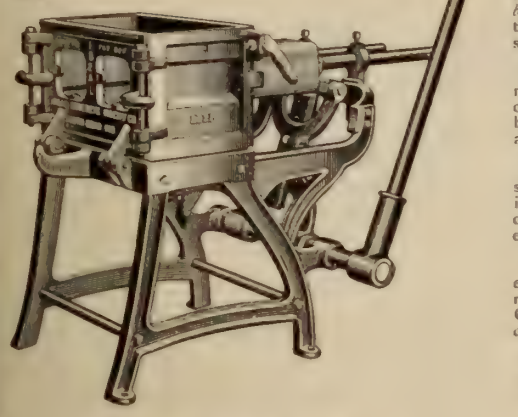

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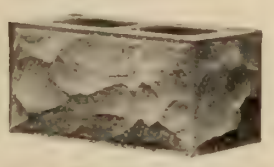

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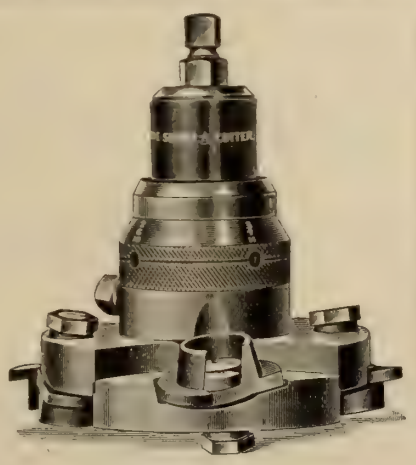

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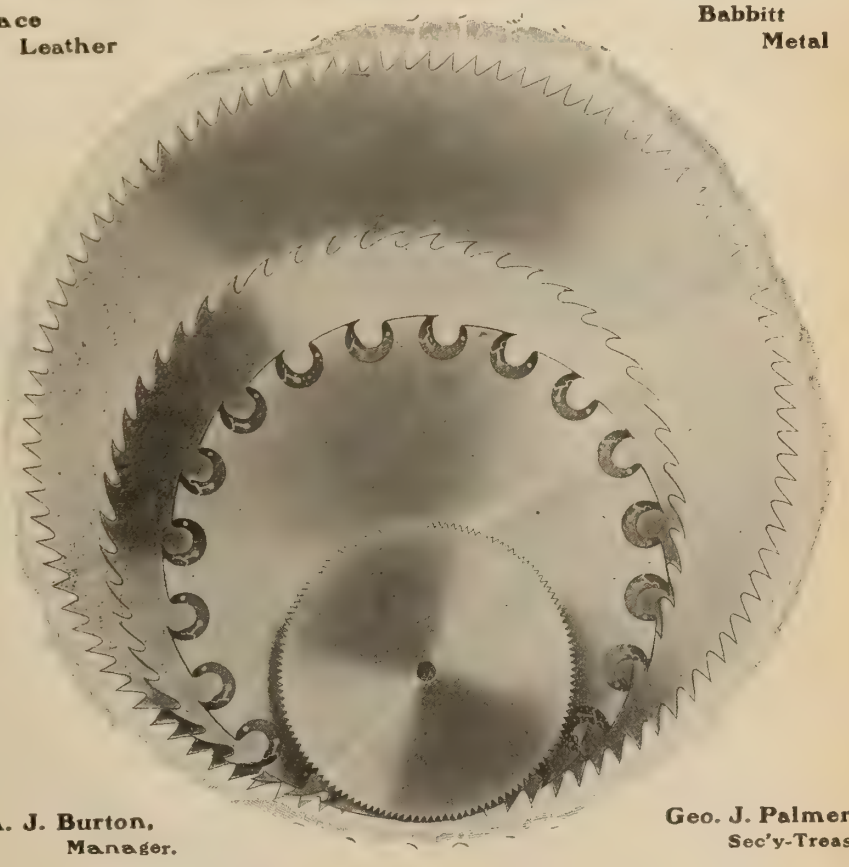

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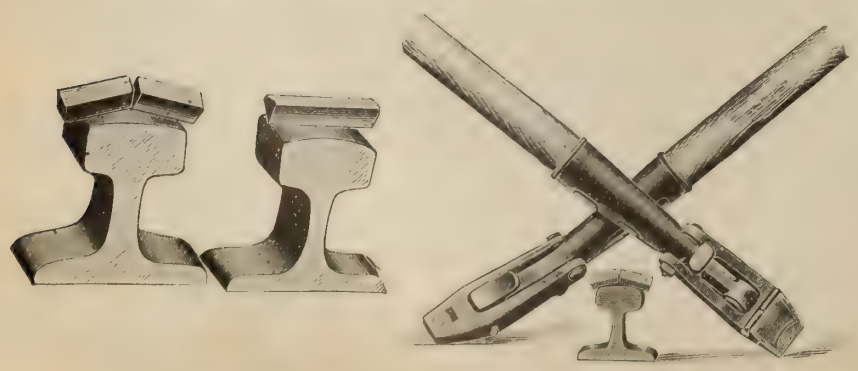

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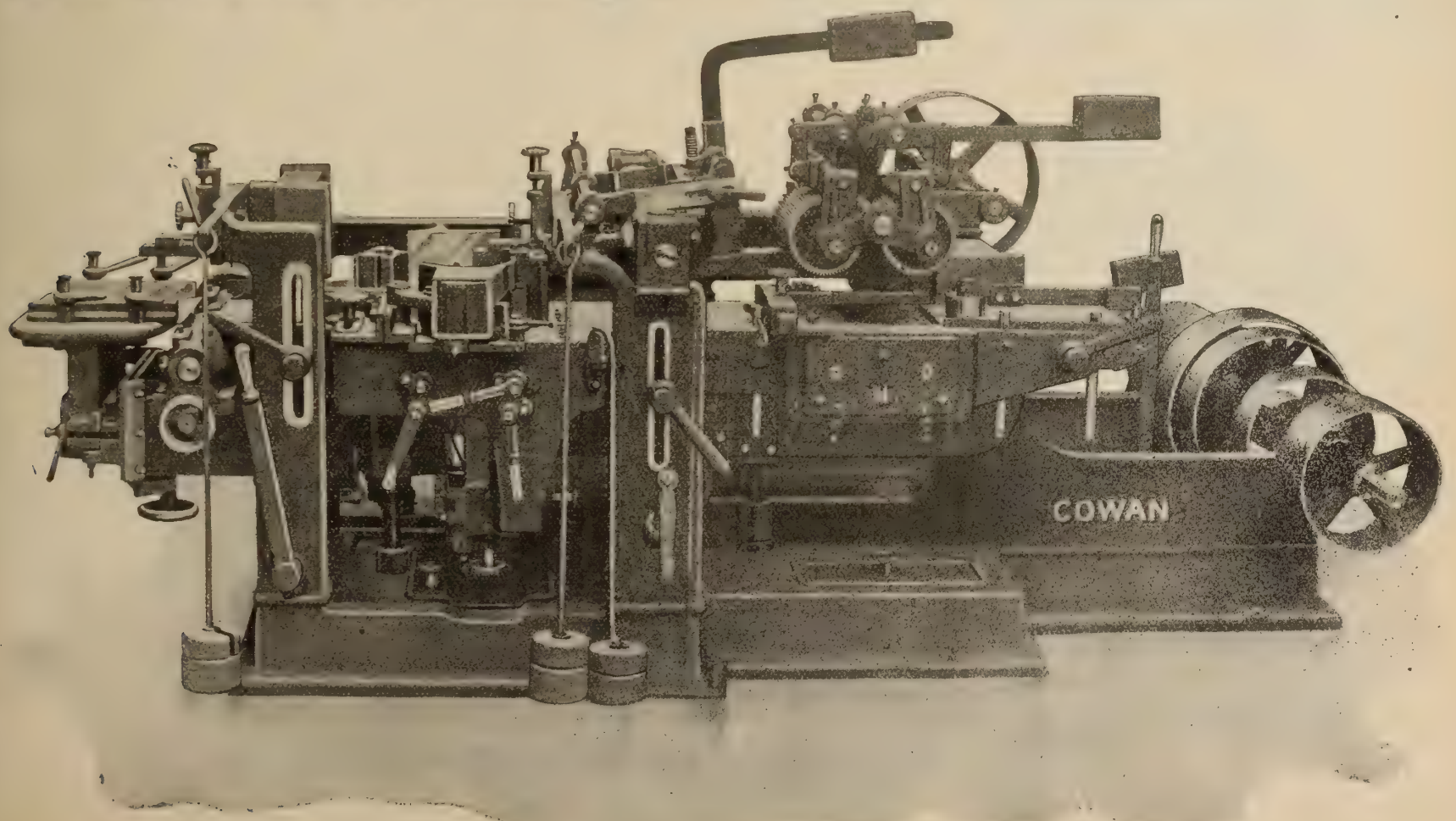

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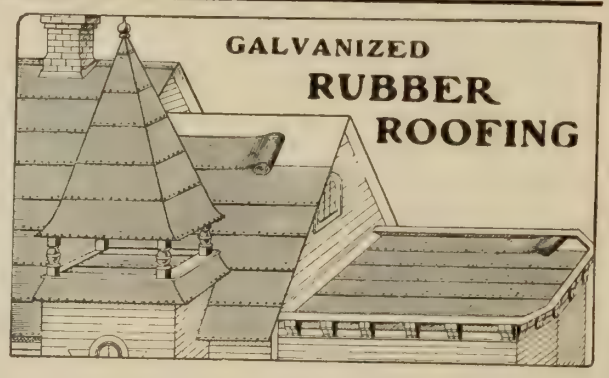

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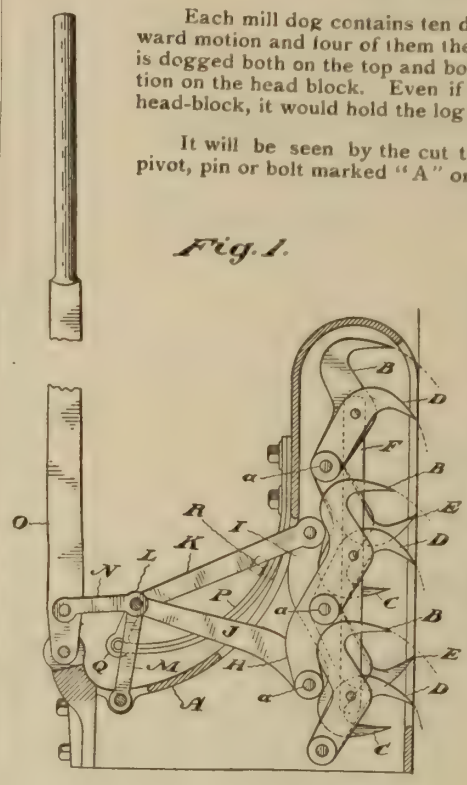

Fig. 1.

Each mill dog contains ten dogs; six of the dogs have the down-forward motion and four of them the upward motion, so that the log or cant is dogged both on the top and bottom, preventing it from turning its position on the head block. Even if the log were dogged, not touching the head-block, it would hold the log as well.

It will be seen by the cut that these ten dogs are fastened on the pivot, pin or bolt marked "A" on the cut, and connected with link bars from the principal dog to the lever "O," which operates all the dogs.

There are five of the dogs which project more than the others, about two inches from the head block, and called the log dogs; and five which project about ⅝ inch from the head-block, and called the board dogs; but when dogging a board or a plank or a stock, all the dogs come evenly out of the head block, about ⅝ inch, so that in dogging a board or a stock, both the log dogs and board dogs grip it, providing that the stock or board is wide enough to take all the dogs.

This patent mill dog will dog perfectly safe in all classes of timber, be it pine, hemlock or hardwood of any description, and besides it does not tear the board or stock.

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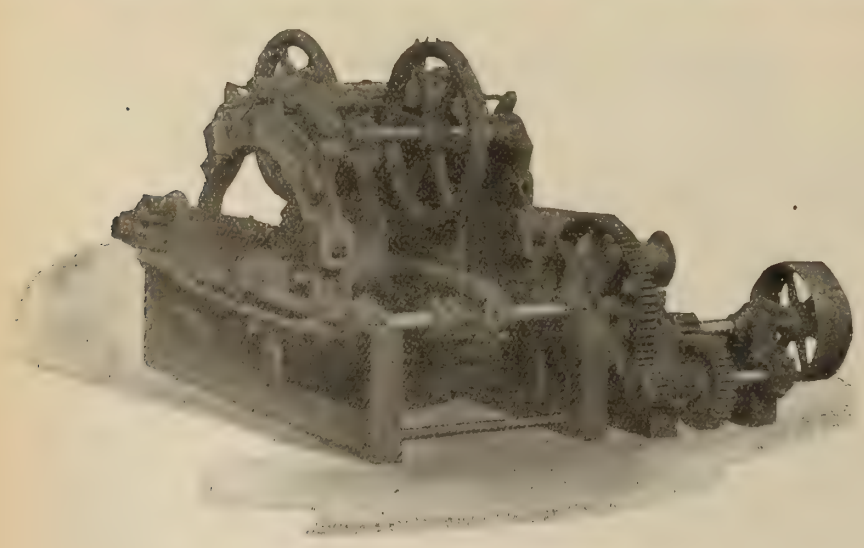

because you can't cut ties as fast as you want to. Just throw out your old make-shifts and put in one of our up-to-date

Log Siding or Tie Machines

Slabs both sides of the log accurately and rapidly at one operation. Both saws movable to or from the centre simultaneously by means of a lever within the sawyer's easy reach, and the spacing indicated on a quadrant in plain sight. Will handle logs from 4½ to 20 inches in diameter and from 30 inches in length up. This machine will cut

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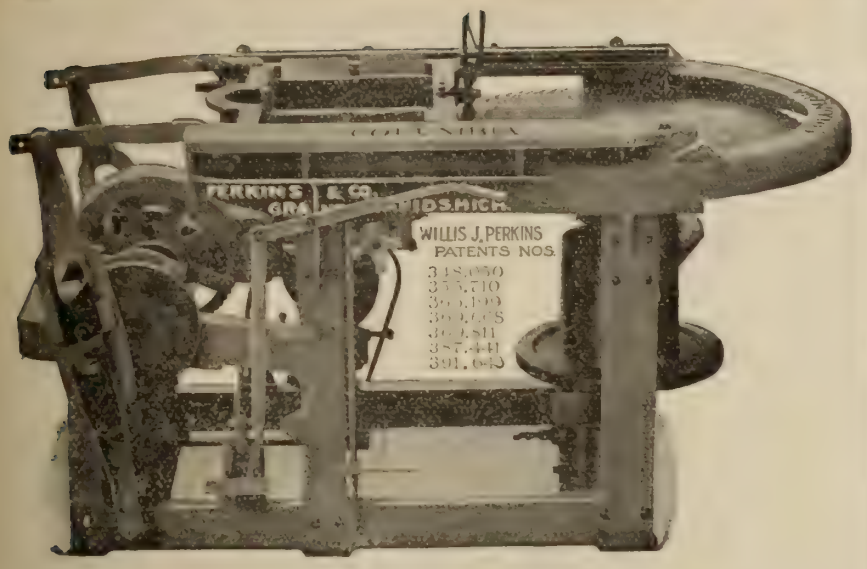

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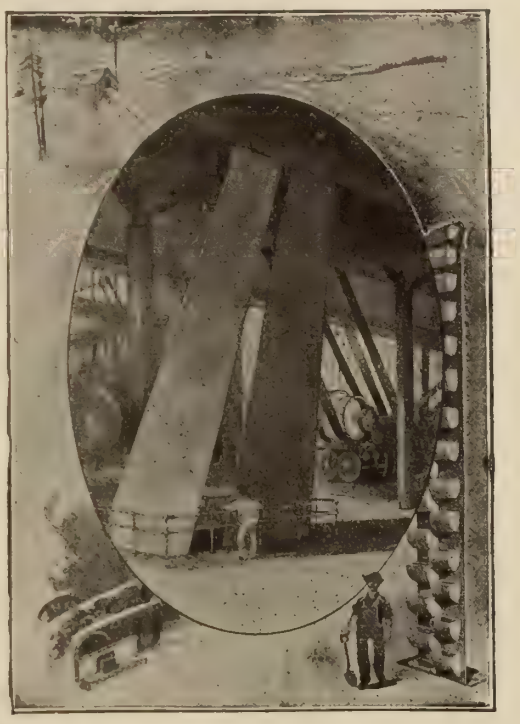

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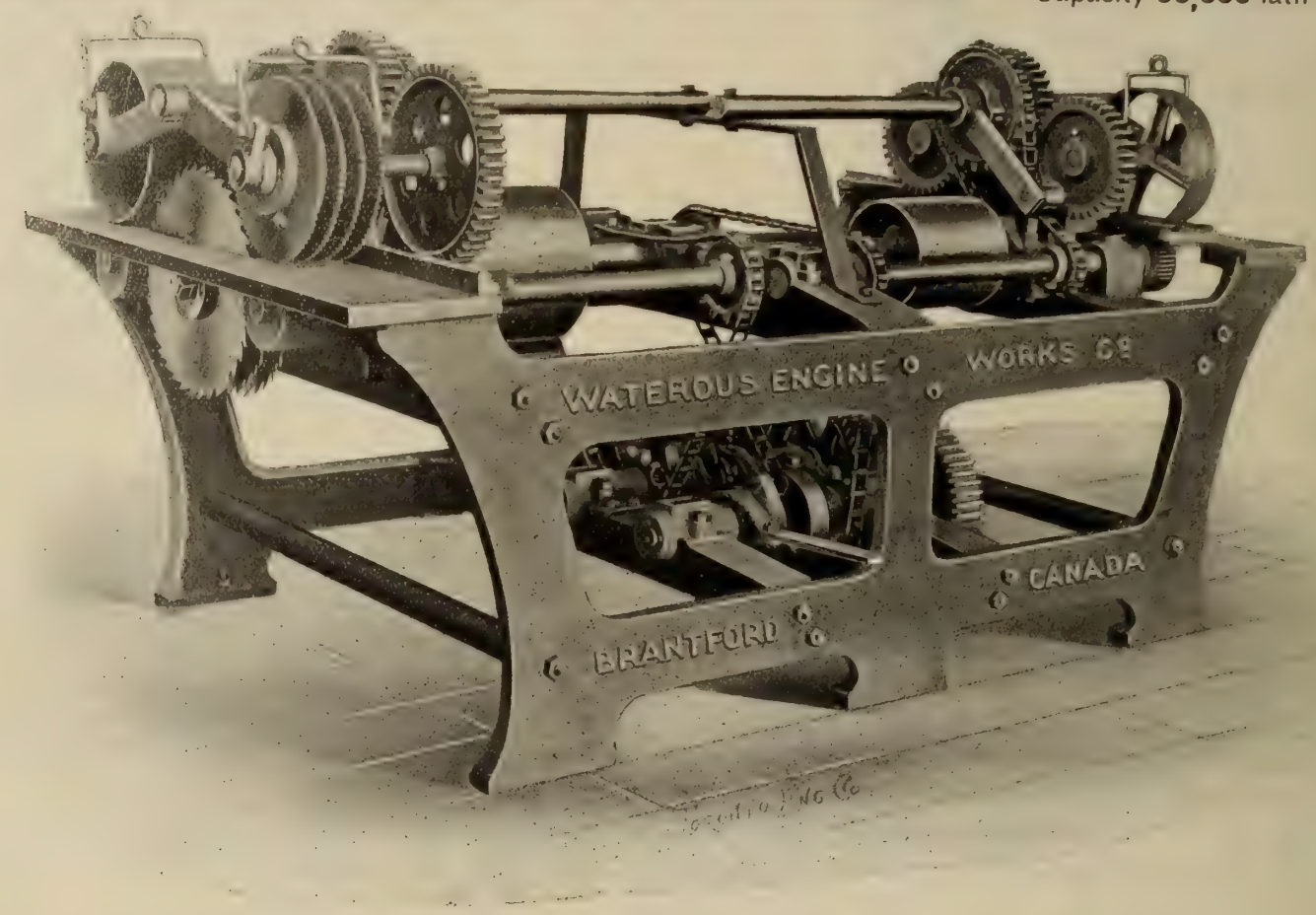
With Independent and Adjustable Feed. All Rolls Upper and Lower Power Driven.

Two idler pulleys supplied, enabling lath saws to run reverse to bolter saws. Capacity 50,000 lath per day.



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This feed can be started or stopped at will of operator as it is driven from counter shaft and not from mandrel.

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We also make a

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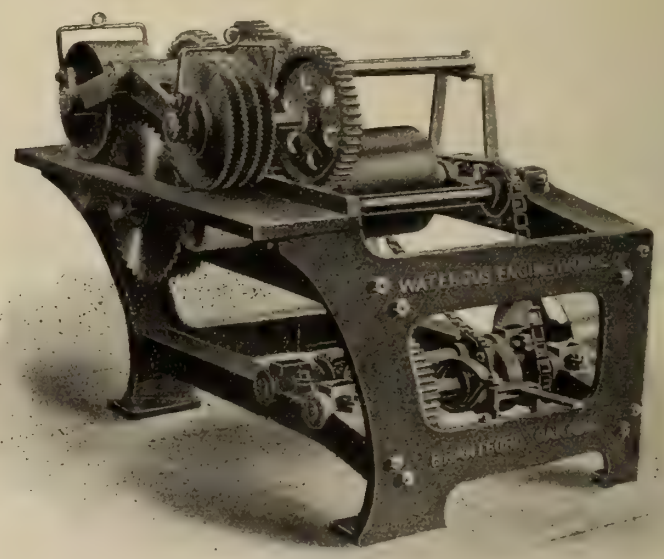

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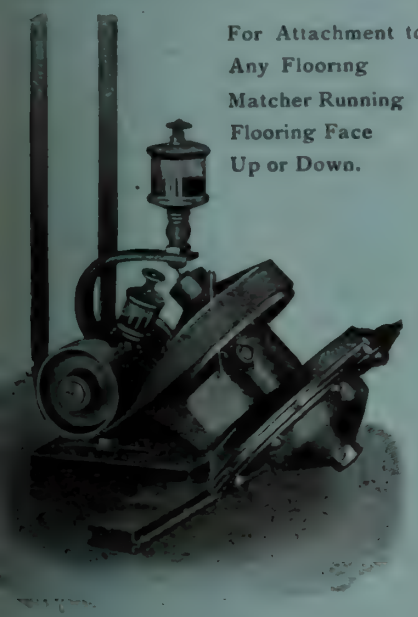

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SHERMAN FACE BORING MACHINE
for attachment to any flooring machine, to bore jointed flooring.

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SHERMAN END MATCHING MACHINE
for end matching flooring.

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No logging outfit is complete without a supply of reliable veterinary remedies. Getting the wrong kind means the loss of the use of your horses when time is valuable.

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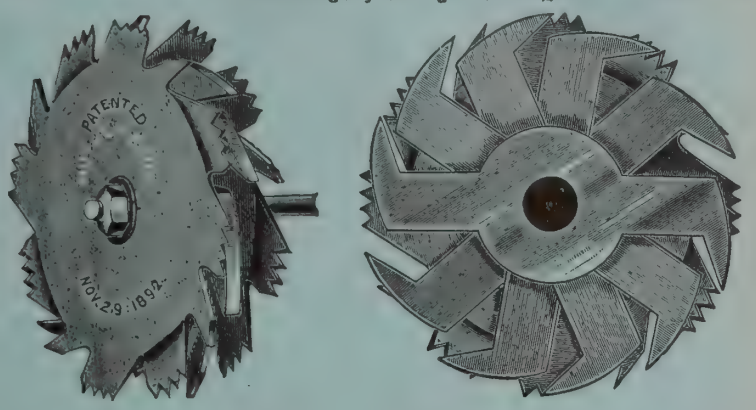

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105 E. Second Street, LIMA, OHIO., U S. A.

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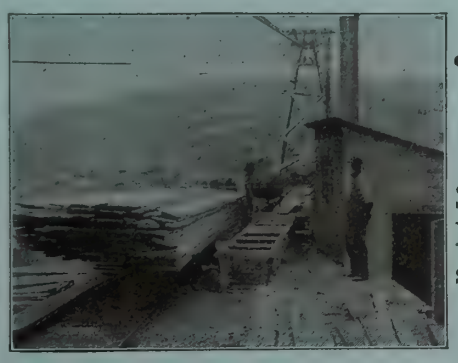
OF

Jeffrey Construction

FOR

Lumber



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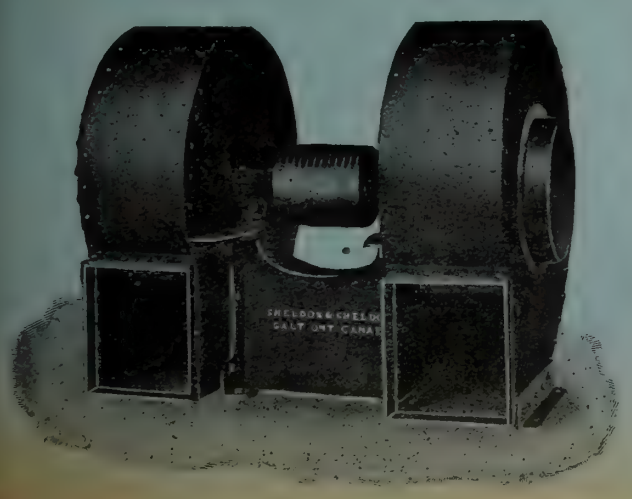

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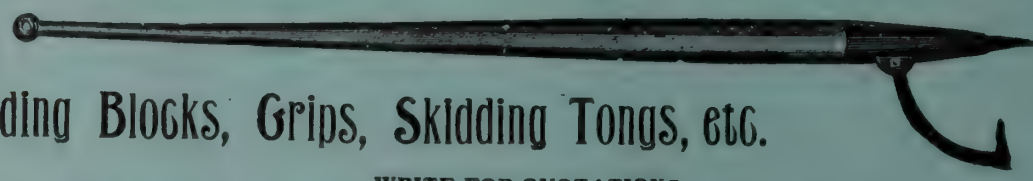

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How much do you lose every year by reason of machinery standing idle while belts are being laced.

You can stop over half of that leak by using the above named tools for running leather laces into belts. They will be sent to any address in Canada by mail on receipt of price with order, and with ordinary care they will last a life-time.

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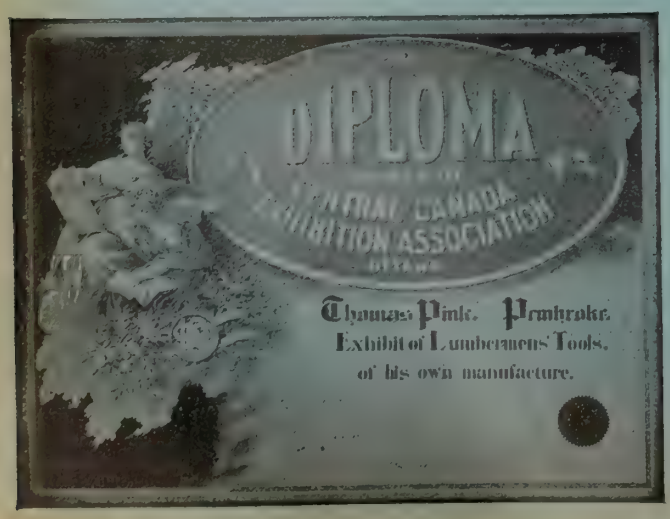

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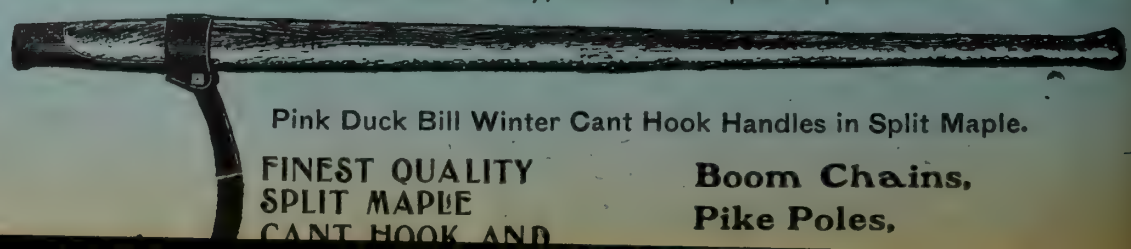

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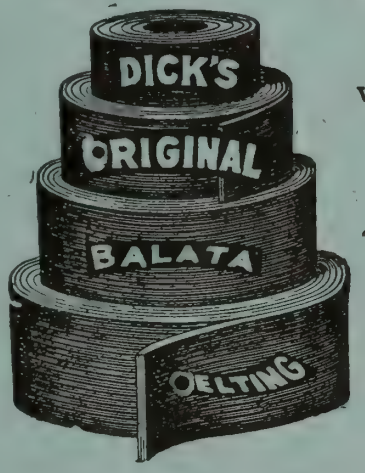

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For the WET PLACES in the SAWMILL

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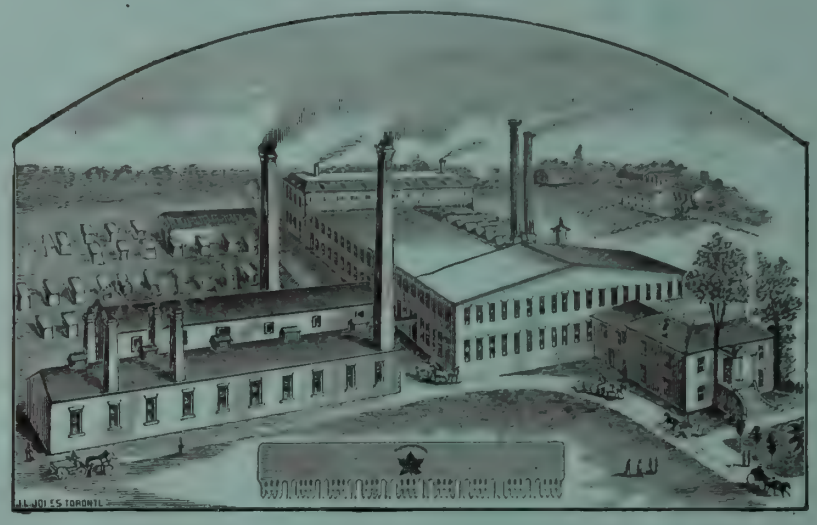

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Save Labor — Save Gumming
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This Saw Stands Without a Rival

AND IS THE

FASTEST CUTTING SAW IN THE WORLD!

Its Superiority consists in its Excellent Temper. It is made of "Razor Steel," which is the finest ever used in the manufacture of Saws. We have the sole control of this steel. It is tempered by our secret process, which process gives a keener cutting edge and a toughness to the steel which no other process can approach.

Maple Leaf Saw Set

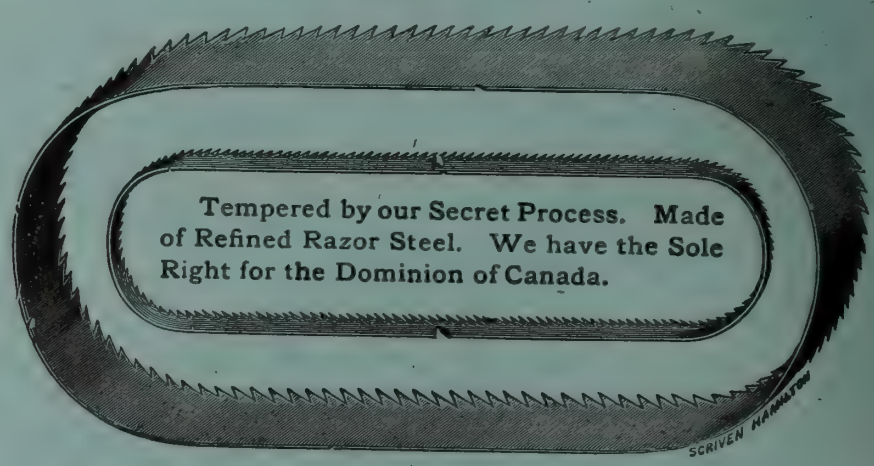
MANUFACTURED BY

SHURLY & DIETRICH, Galt, Ont.

Directions.—Place the set on the point of tooth, as shown in the accompanying cut, and strike a very light blow with a tack hammer. If you require more set, file the tooth with more bevel.

If you follow directions you cannot make a mistake. Be sure and not strike too hard a blow, and it will set the hardest saw. On receipt of 40 cents we will send one by mail.

We are the only manufacturers in the world who export Saws in large quantities to the United States.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We Manufacture

HIGH GRADE BAND SAWS

Of All Widths and Lengths.

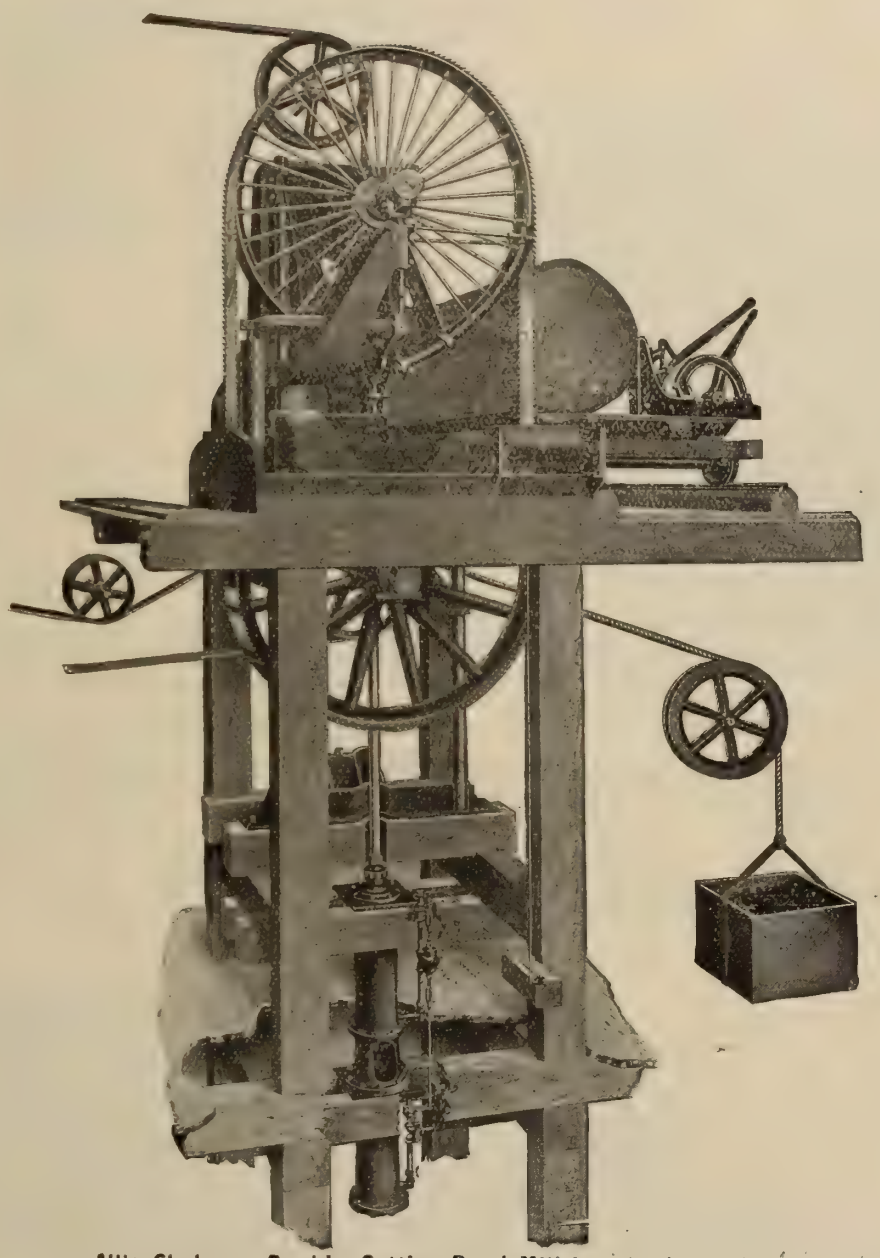
These Saws are made of Refined Razor Steel, and tempered by our Secret Process; for Fine Finish and Temper are not excelled.

THE BAND MILL RECORD!

THE claim for a day's cut of ten hours from a double cutting band mill has been placed at an average of 7,500 feet per hour, but an Allis-Chalmers double band mill, installed in a mill of the El Dorado Lumber Company, of San Francisco, on the 27th of February, made a cutting of 8,620 feet per hour, or 86,205 feet per day of ten hours. This machine is a 14 inch double cut Allis band mill, and has been in use since the previous spring.

On the same day a single Allis band mill cut 73,964 feet, making a total of 160,169 feet for the day's run.

The record for the 27th, although remarkable, was somewhat bettered by the cutting made in the same mill with the same machines on the 28th, the day following. The single band mill cut 79,203 feet, and the double cutter 84,219 feet, both in ten hours, making a total of 163,422 feet for the day's run. The figures show that the cut of February 27th was not an extraordinary run for this mill.



Allis-Chalmers Double Cutting Band Mill in raised position for large log. See Bulletin 1700.

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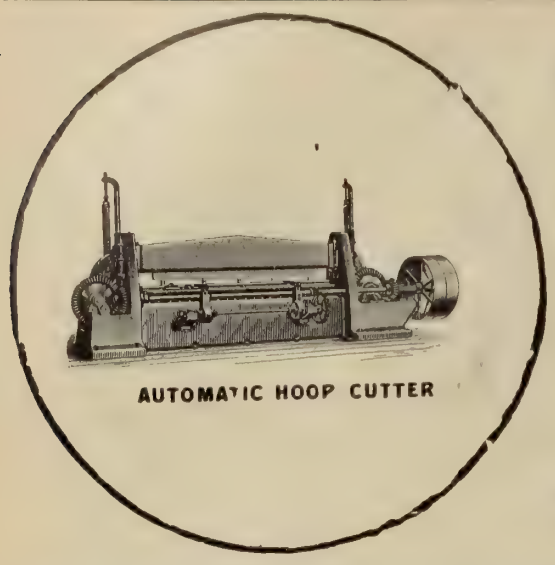

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Handles of Every Kind, Insulated Pins, Spools, Bobbins, Oval Wood Dishes, and General Wood-Work.

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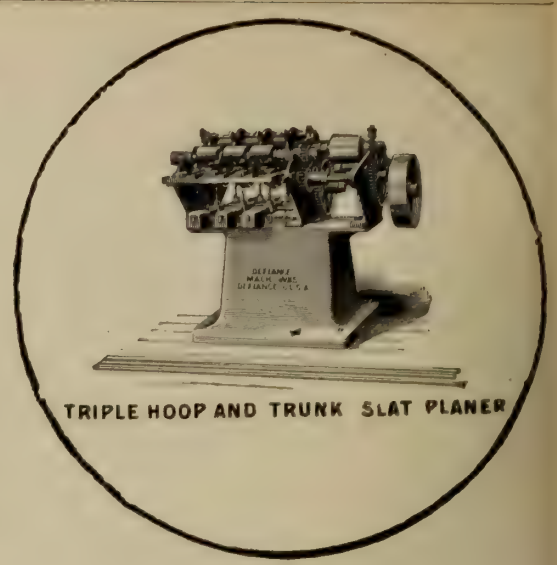

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The "Alligator" Steam Warping Tug

SIDE WHEELS OR TWIN SCREWS

The Twin Screws are arranged with flexible joint to raise up in crossing portage

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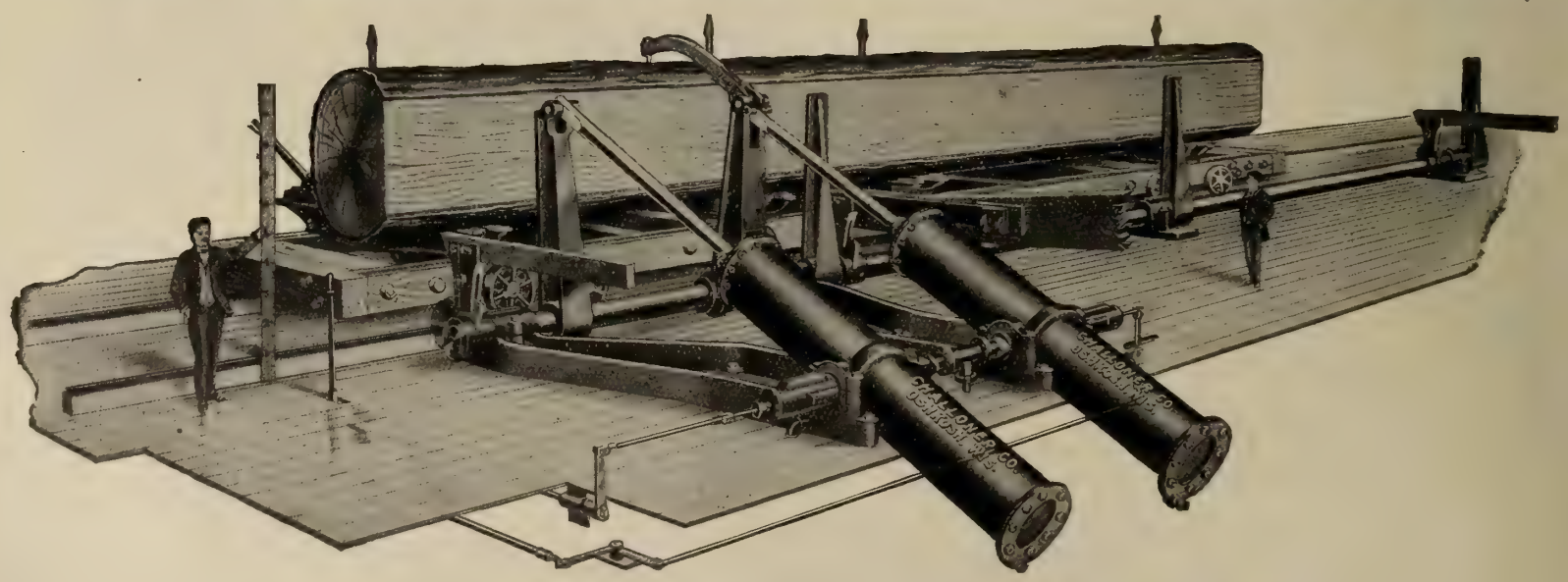

This is the only Log Turner that uses no tooth bar and turns the log away from the carriage. The log is turned on the log deck, thus relieving the carriage of all strain and jar. ill handle small logs as quickly as any "nigger" and logs scaling 500 feet and over much quicker. Will handle larger logs than is possible with a "nigger." Don't buy a Log Turner of any kind till you investigate the Simonson.

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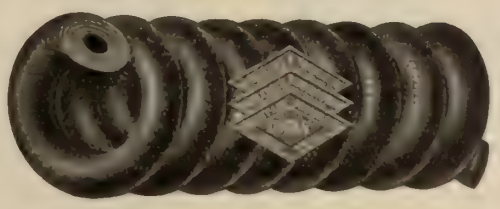

"Cobb's" Packing is especially adapted to withstand heat and highest pressure. The rubber core is oil and heat-proof and will not harden, but remain elastic indefinitely. The outside covering is made of material that is not affected by heat. The lubricant employed is the result of much scientific research and is absolutely free from grit or acids.

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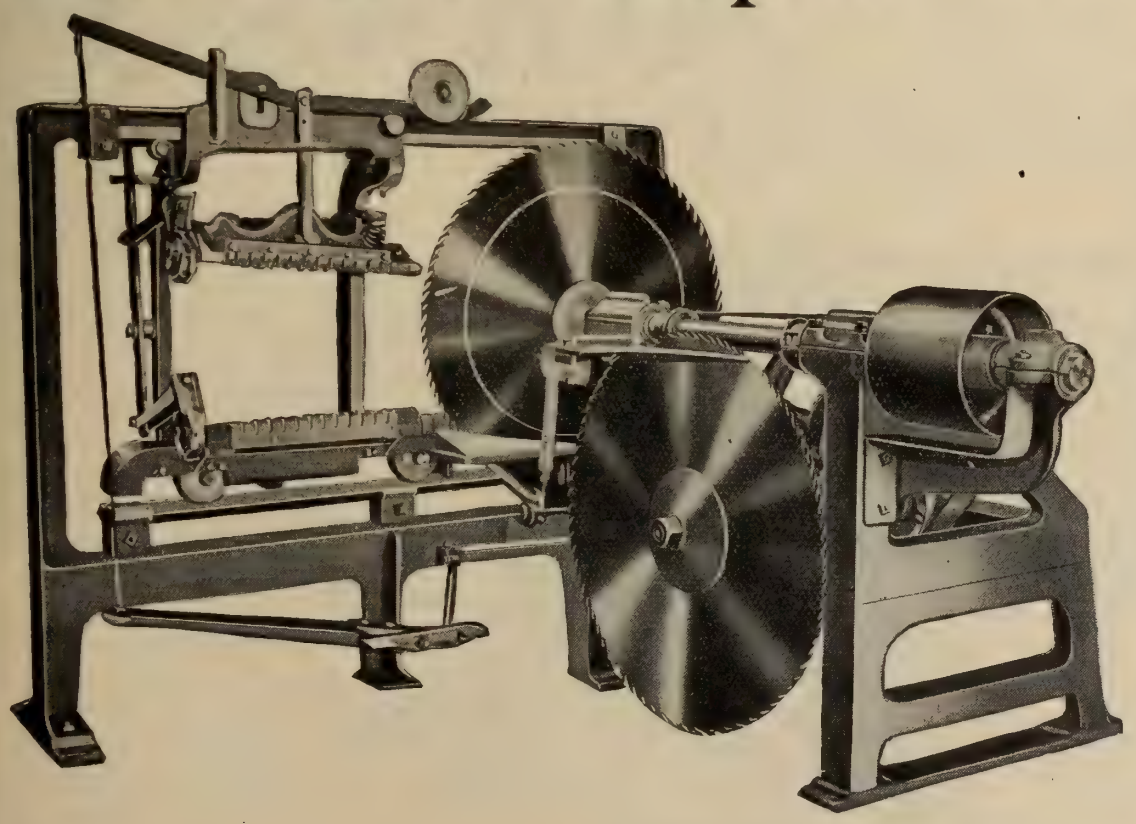
173 Queen Street East, TORONTO, CANADA

Iron Frame "Simplex" Shingle Machine



IN this, our latest design of Shingle Machine, we have incorporated all the advantages contained in our wood frame "Simplex" and added several improvements.

The arbor has been made heavier and a third bearing added to support it outside the driving pulley. The method of putting lead in the saw arbor has been greatly improved. This is now done by swinging on a centre directly under the saw the whole frame which carries the arbor. Thus the alignment of the bearings is not in any way affected and there will be no danger of hot bearings after the lead has been changed. The change may be made while the machine is running and without stopping the carriage.

An improvement has also been made in the method of driving the edger. It is belted direct from a shaft running at right angles to the main arbor from which it is driven by means of a bevel friction. This makes a very neat, compact drive and has proved satisfactory in the mill.

The rail on which the carriage travels is made of square steel and when worn can be renewed by simply turning upside down.

Over three hundred of our Upright Machines (wood and iron frames) are in use in British Columbia and Washington.

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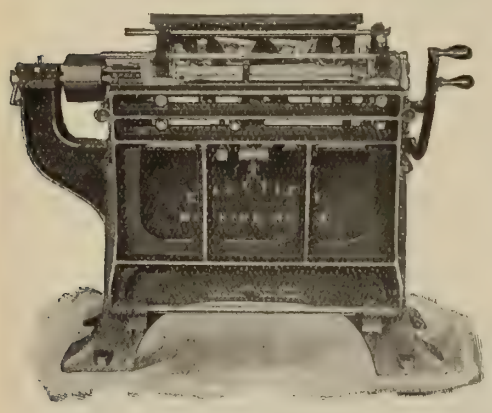
You Can Save Money Turning Balusters

Besides Making More of Them and Much Better Ones



If You Will Use

Our No. 2 Baluster Machine

Turns Balusters, Spindles, Table Legs, any pattern, hard or soft wood, 1,000 pieces daily. Does perfect work at less cost than by hand. Stock is held in chucks, instead of between centres, avoiding all vibration. If you make balusters you should investigate carefully.

May we send samples of work and detailed description?

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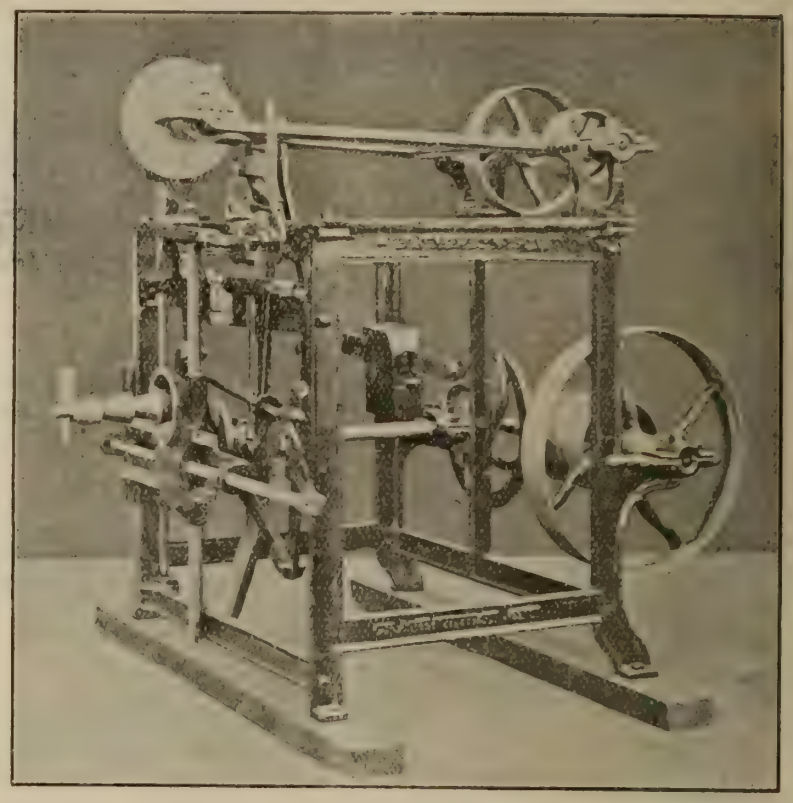
AUTOMATIC SHINGLE SAW SHARPENER



The above cut shows one of our **Automatic Shingle Saw Sharpeners,** an ingenious machine, easily handled and adjusted. Perfectly automatic and solidly built. The operator can give the saw teeth any shape desired, and without attention other than to adjust and start it. The machine gives the saw perfectly shaped and uniform teeth. One of the best machines for sharpening Shingle Saws on the market.

We manufacture **Saw Mill and Shingle Mill Machinery, Saw Carriages, Saw Frames, Log Decks, Loaders, Niggers, Set Works, Steam Feeds, Carriage Buffers, Live Rolls, Trimmers, Edgers, Lath Machines, Bolters, Etc.**

Write to us for Catalogue and Prices.

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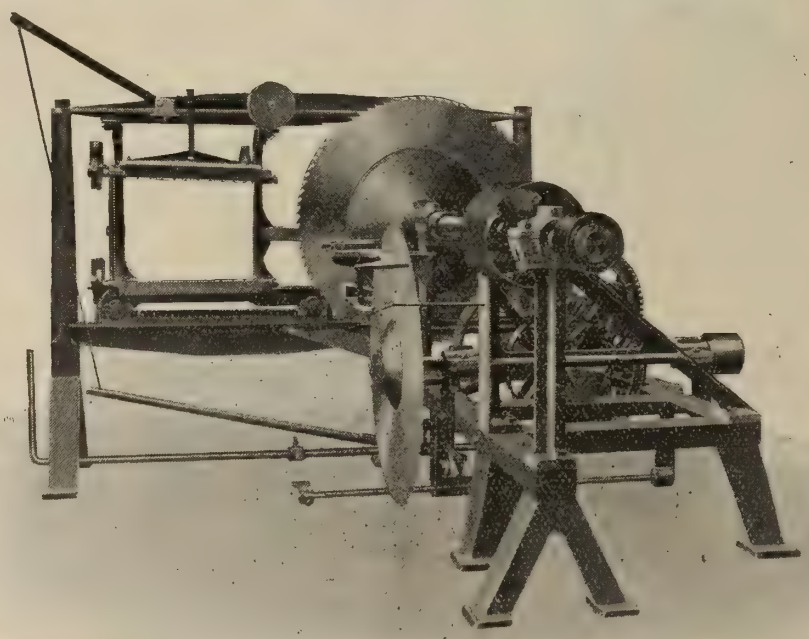
UPRIGHT SHINGLE MACHINE

Capacity 30,000 to 45,000 Shingles per ten hours



The Machine that has brought BRITISH COLUMBIA SHINGLES to the Front.

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Its construction is simplicity itself.

It is the envy of all its competitors.

If you want to make shingles that bring the highest price, you must use the Johnson Machine.

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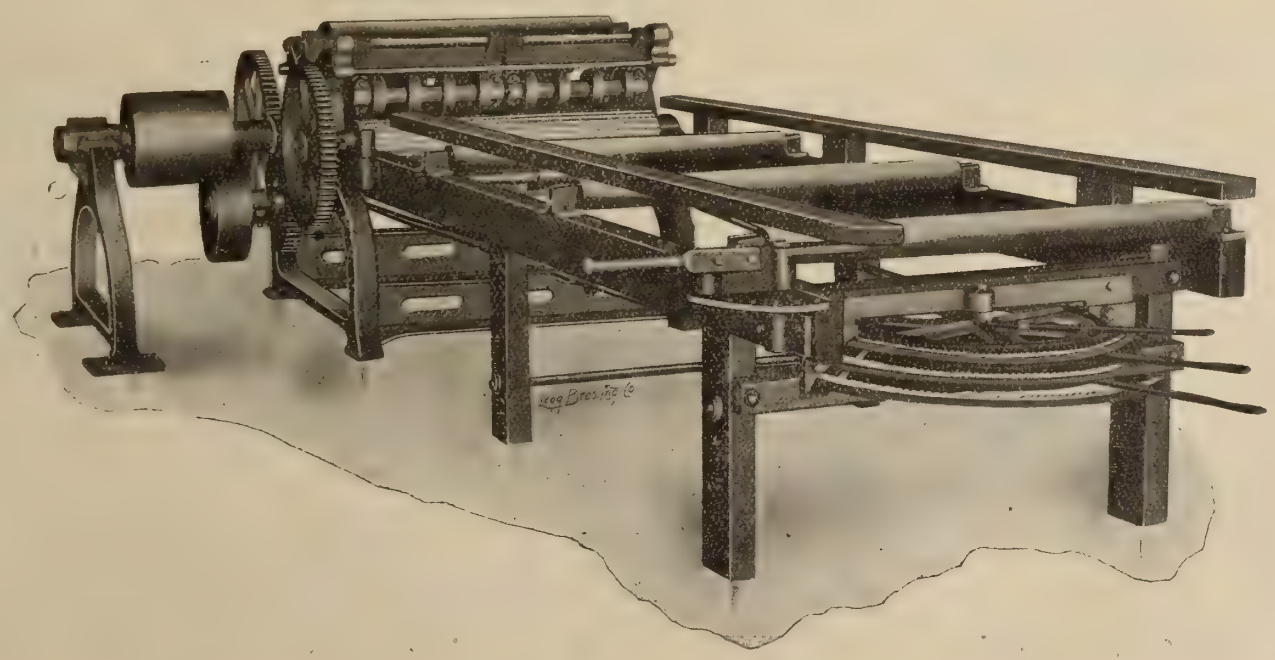

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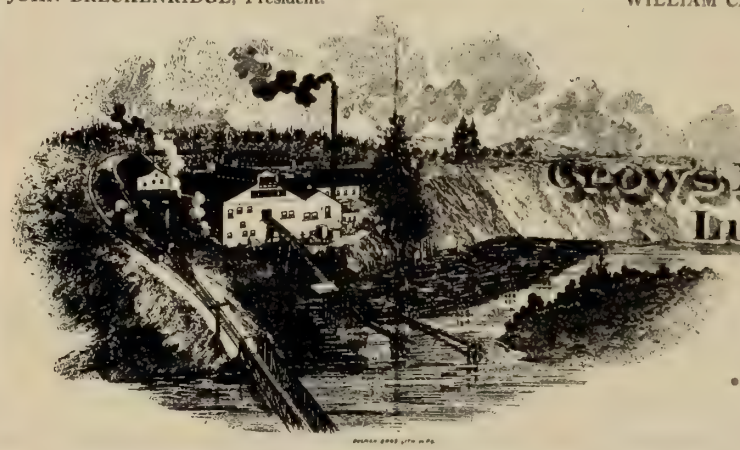

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500,000 feet of Fir Shiplap in stock, ready for immediate shipment

We cut up to 106 feet long and plane up to 16 in. x 30 in.

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Saw and Planing Mills at Ryan, Cranbrook and Jaffray, B. C.
Capacity 150,000 Feet per Day.

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Lumber, Timber, and all kinds of Mouldings, also Dealers in Railway Ties, Piles and Poles.

Large Stocks of Well Seasoned HEAD OFFICE

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Manufacturers of

CEDAR
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FIR PRODUCTS

Shiplap, Boards, Dimension
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Annual Capacity
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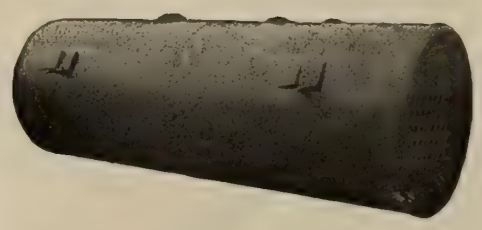

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CANADA LUMBERMAN
AND WOOD-WORKER

VOLUME XXVIII. NUMBER 9. } TORONTO, MONTREAL—SEPTEMBER, 1907—WINNIPEG, VANCOUVER { TERMS, $1.00 PER YEAR Single Copies, 10 Cents

THE MANUFACTURE OF WOODEN PIPE.

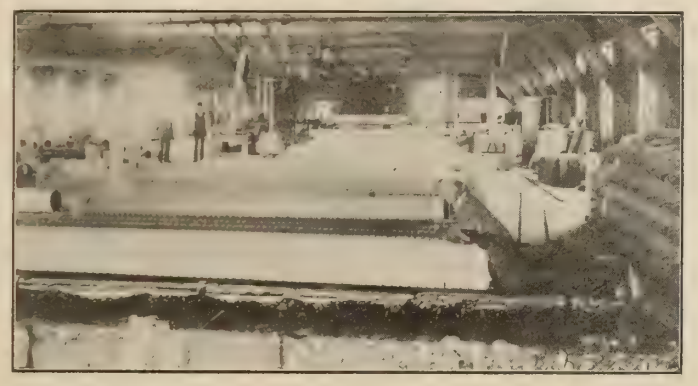
Among the many and varied industries of the Pacific coast, none perhaps is more interesting than the manufacture of wooden pipes. Being cheaper, both in initial cost and in the transportation charges, and yet equally as strong and serviceable as iron or tile pipes, they are rapidly coming to the forefront in the favor of the leading engineers of the continent.

The wood pipe industry has been in existence for the past twenty years in the United States, and for the past four years in Canada, the first Canadian factory being located in Vancouver, British Columbia. There are now three wood pipe manufacturing companies on the Canadian coast, two in Vancouver and one—the Dominion Wood Pipe Company, Limited, in New Westminster. The Dominion Wood Pipe Company is a comparatively new concern, having come into existence about one year ago. This company controls a new patented process of winding the wire, their method being to use two independent strands of wire instead of one. This is said to give an added strength to the pipe, as, in the event of one of the wires breaking, the other wire will hold fast.

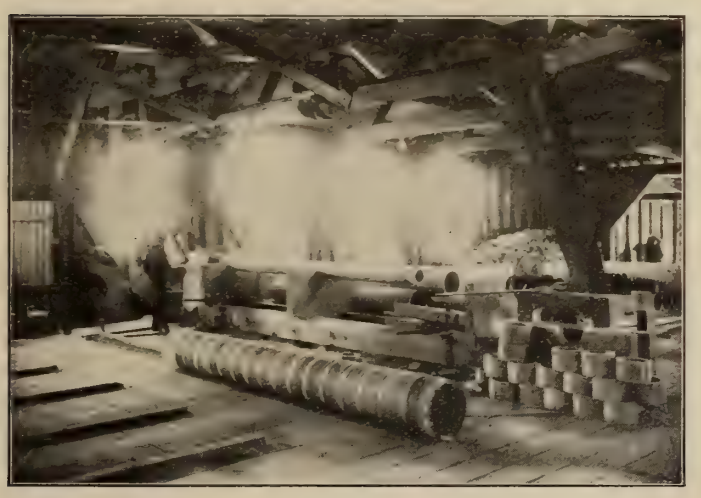
The plant of the Dominion Pipe Company occupies an acre of ground in the city of New Westminster and consists of five buildings at present, the factory, the power house, the dry kiln, the warehouse and the office. The factory building is 68 feet by 138 feet. It contains a Berlin planer and moulder; a winder, for putting the wire around the pipes; a header, for trimming the ends of the pipes suitable for and adjusting the head or coupling; a band re-saw, and a horizontal band cut-off saw. This latter machine is of special construction and its purpose is to trim the ends of the pipe; also to cut couplings. Before they are cut apart, a series of couplings have the appearance of one solid pipe, with the wire wound around for a short distance and then cut off and re-started a little further on. When completely wire-wound in this way the "pipe" is taken out of the winder, and transferred to the cut-off saw, where each section or coupling is cut apart. The factory also contains a large dipping vat wherein every pipe and coupling is dipped in tar as a preservative.

The boiler and engine house is at one end of the factory. This is an iron sheeted structure, 28 x 32 feet. A horizontal boiler of 120 pounds pressure is used. The dry kiln is 24 x 70 feet, and has a capacity of 10,000 feet of lumber per day. The system was installed by the North Coast Dry Kiln Company of Seattle, Wash. The dry kiln is a special feature of the Dominion Company's equipment, and they are thus assured always of having perfectly dry lumber for use. The storage shed is 36 x 68 feet, with a railway spur line immediately alongside. The company can manufacture pipe of all sizes from 2 inch up to 24 inch. The daily capacity of the plant is about 2,000 feet of 6 inch pipe and 750 couplings, about 20 men being employed.

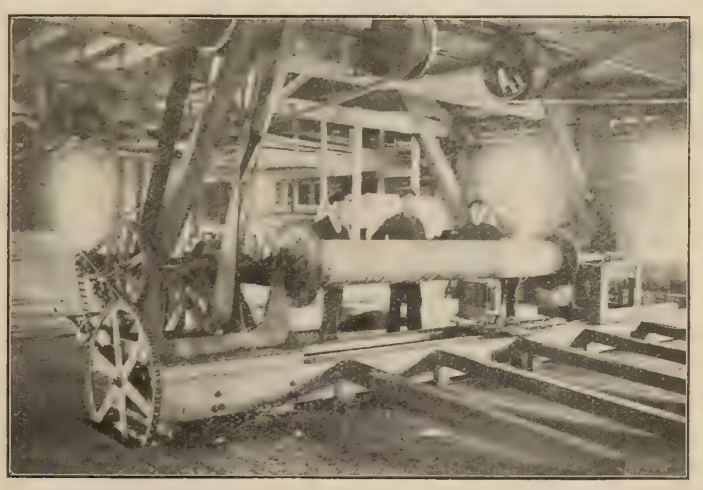
MAIN FACTORY BUILDING AND DRY KILN.



BATCH OF PIPE READY FOR DIPPING; VAT IN FOREGROUND, WINDER IN REAR.



INTERIOR VIEW OF FACTORY, SHOWING HEADING MACHINE.



SHOWING METH OF WIRE WINDING. THEY ARE MAKING COUPLINGS.

VIEWS OF THE DOMINION WOOD PIPE COMPANY'S WORKS, NEW WESTMINSTER, B. C.

THE OPEN-TANK METHOD FOR THE TREATMENT OF TIMBER*

By Carl G. Crawford,
Chief, Office of Wood Preservation, U. S. Forest Service.

There has thus grown up a demand for some cheap and simple process of wood preservation adapted for timber in common use, for which the pressure methods are too expensive. The general adoption of such a process would largely increase the amount of timber artificially preserved, and so result in a great saving in the amount of timber consumed annually in the United States. It would insure the more complete utilization of the forest products, and encourage the use of many so-called "inferior," or quickly decaying, woods for purposes for which only high grade, or decay-resistant, woods are now almost exclusively used.

History of the Open-tank Method.

There have been many attempts to find a cheap and effective preservative process requiring no costly mechanical equipment. Most of these attempts were founded on an unsound theoretical basis, and many of them failed for other reasons. Obviously one of the simplest methods of securing a penetration is to boil the wood in the preservative, and this method has been frequently employed. It was not, however, until the year 1867, when Prof. Charles A. Seely, of New York, discovered and patented the process which bore his name, that the true value of the boiling method was ascertained. Through Seely's attempt to increase the penetration by immersing the timber in a bath of cold preservative after it had remained for some time in the boiling liquid was discovered the principle which later developed into the open-tank method of to-day. Apparently, however, Seely's investigations attracted but little attention at the time, and though some writers assert that his method was used in various parts of the United States, no record can be found to-day of its application on a commercial scale. It appears to have been practically abandoned after a few years.

At the Louisiana Purchase Exposition a series of experiments was undertaken by the Forest Service to determine some practical method of prolonging the life of fence posts. The expense of treating such timbers by the pressure processes was prohibitive; yet the receding of the forests, the agricultural development of the country, and the fencing in of large quantities of grazing lands in the West had depleted the supply of posts for farm purposes and raised their price. In the St. Louis experiments, boiling the posts in a vat containing tar oil was at first attempted, with only fair results, but in the course of the tests to increase the penetration the principle of the method once employed by Seely was revived. Subsequent developments in the experiments in which the Forest Service has applied this principle have resulted in what is known as the open-tank method.

*Abstract from Circular No. 101, published by the Forest Service of the U. S. Department of Agriculture.

What the Open-tank Method Is.

As already suggested, the open-tank method is based upon the use of an open tank, capable of withstanding heat, and either equipped with steam coils or so arranged that fire can be placed underneath.

Sufficient preservative is run into the tank to cover the portion of the timber which is to be treated, and the temperature of the liquid is then raised slightly above the boiling point of water. This temperature is maintained for a length of time depending upon the character of the wood and the treatment desired. At the end of the hot bath the timber is either quickly transferred to another vat containing a cold preservative, in which it is submerged for a definite period of time, or else the heat is shut off and the timber is allowed to remain in the cooling liquid until the required absorption is obtained or until no further absorption takes place. The time required by the treatment may be shortened, without transferring the timber from one vat to another, by running out the hot liquid at the end of the hot bath and simultaneously letting in the cold liquid.

Theory of the Process.

The former theory of the process held that the hot preservative converted the moisture in the wood into steam and so expelled a large percentage of it, and that the cold bath condensed the steam in the pores of the wood and so formed a vacuum into which the preservative was forced by atmospheric pressure. In this way it was thought that the timber became seasoned just before or simultaneously with the entrance of the preservative. From this theory it also followed that green timber containing a large amount of moisture could be given a better treatment than seasoned timber, since the greater the amount of moisture in the wood the greater would be the vacuum formed when the vapor is driven off.

Recent experiments of the Forest Service with the open-tank process and with other processes have brought out, among other things, that though fairly good results were obtained by the open-tank method as formerly carried on, the theory itself was incorrect. The amount of space occupied by air in the timber was given too little consideration. It is true that a vacuum is created in the cellular structure of the timber, to destroy which the preservative is forced into the wood in part by atmosphereic pressure. This vacuum, however, is principally produced not by the vaporization of the water, as was formerly supposed, but by the expansion and expulsion of the air within the wood cells and intercellular spaces. Wood, as is well known, is a very poor conductor of heat. It is almost impossible, therefore, in any reasonable time to heat a piece of timber to or above the boiling point of water, except in a thin exterior layer, without employing temperatures which would injure the fibre and volatilize large quantities of the preservative. Hence it is unreasonable to suppose that any considerable quantity of the water in the interior of the wood is sufficiently heated by the open-tank method to volatilize and escape.

If, again, as was formerly held, the creation of the vacuum were due wholly to the volatilization of the moisture in the wood structure, it naturally would follow that green wood, which contains relatively large quantities of water, would secure a stronger vacuum and therefore a better penetration than would seasoned wood from which most of the moisture had already evaporated. But numerous experiments carried on by the Forest Service have conclusively shown that, no matter what the process of treatment, a deeper and more uniform penetration will be secured if the timber is first seasoned, so that any theory which appears to explain why green timber is better adapted to treatment than is seasoned timber must be founded partly on error.

For the foregoing reasons, whatever quantity of water is driven off in the treatment of green timber must come chiefly from the outer layers. This quantity is of relatively little importance when the whole amount of water contained in green timber is considered. The importance of the expelled air is shown by the numerous bubbles that appear on the surface of the hot liquid during the treatment of seasoned timber, in which the cell openings and intercellular spaces are largely filled with air instead of water.

It is a familiar law of physics that at the boiling point of water it expands much more than air does, whereas at lower temperatures the reverse is true. Since, in practice, the wood can not be heated throughout by the open-tank method to the temperature of boiling water, the lower temperatures which are actually maintained must naturally have a greater effect on the air within the cellular structure than on the water.

Finally, according to the former theory the exposure of the timber to the air for more than a few seconds during the transfer from the hot to the cold bath would be sufficient to lower its temperature below the condensing point of steam, and this cooling would produce at least a partial vacuum, which would be destroyed by the entrance of air. As a matter of fact, however, a very good penetration can be secured after the timber has been exposed to the air for several minutes, especially in the case of seasoned timber of a porous nature. In other words, the tempera-

ture of the timber may fall to a point considerably below the condensing point of steam and still retain air expanded to such a degree that it will still further contract when immersed in the cold fluid and thus produce a vacuum which will be destroyed only by the forcing of the fluid into the cellular and intercellular spaces by atmospheric pressure.

In consideration of these and other observations it is believed that the creation of the vacuum is due in a larger degree to the expansion and driving off of the air than to the vaporization and driving off of the moisture; that while the latter assists in producing the vacuum it is not so important as was formerly held, and a good vacuum can be secured without it.

Capillary attraction undoubtedly assists in the penetration of the preservative, though it is of secondary importance, especially where the absorption is at right angles to the grain of the wood. It is obviously greater in seasoned wood than where the intercellular spaces are obstructed by sap.

tration should be regulated by the cold bath rather than by prolonging or shortening the hot bath and allowing the timbers to remain in the cold preservative for an indefinite time. A thorough heating gives a much better and more even penetration, by expanding the openings into the cellular spaces and allowing freer circulation through the pores of the timber. Moreover, when the outer zone has been thoroughly heated the timber may be removed from the cold preservation before the vacuum has been completely destroyed in the interior of the wood, and in this way a better penetration is secured with a less amount of the preservative, since the liquid in the outer saturated zone is drawn in after the timber is removed, leaving the surface clean and dry. It has frequently been shown that very little penetration is obtained in the hot bath, and that almost the entire penetration is secured during the cold or cooling bath. This holds in all cases unless the timber is thoroughly seasoned and absorbs the preservative with exceptional readiness.

In treatment by the pressure-cylinder process, especially if the timber has already reached a more or less air-dry condition, care must be exercised to prevent the temperature from rising to a point injurious to the wood fibre. With the open-tank method, however, at least with the preservatives in use at the present time, there is much less likelihood of injury from this source. In the case of salt solutions, the boiling points do not greatly exceed that of water; in the case of oils, their volatility, even at temperatures far below the boiling points of any of their constituents, renders it necessary to keep the temperature at the lowest practicable point if the most economic treatment is to be secured. The treatment of green timbers and timbers which do not absorb the preservative readily requires the use of higher temperature through longer periods.

In selecting creosote oil for all open-tank treatments, in order that the loss by volatilization may be reduced to a minimum, the preference should be given to oils which contain

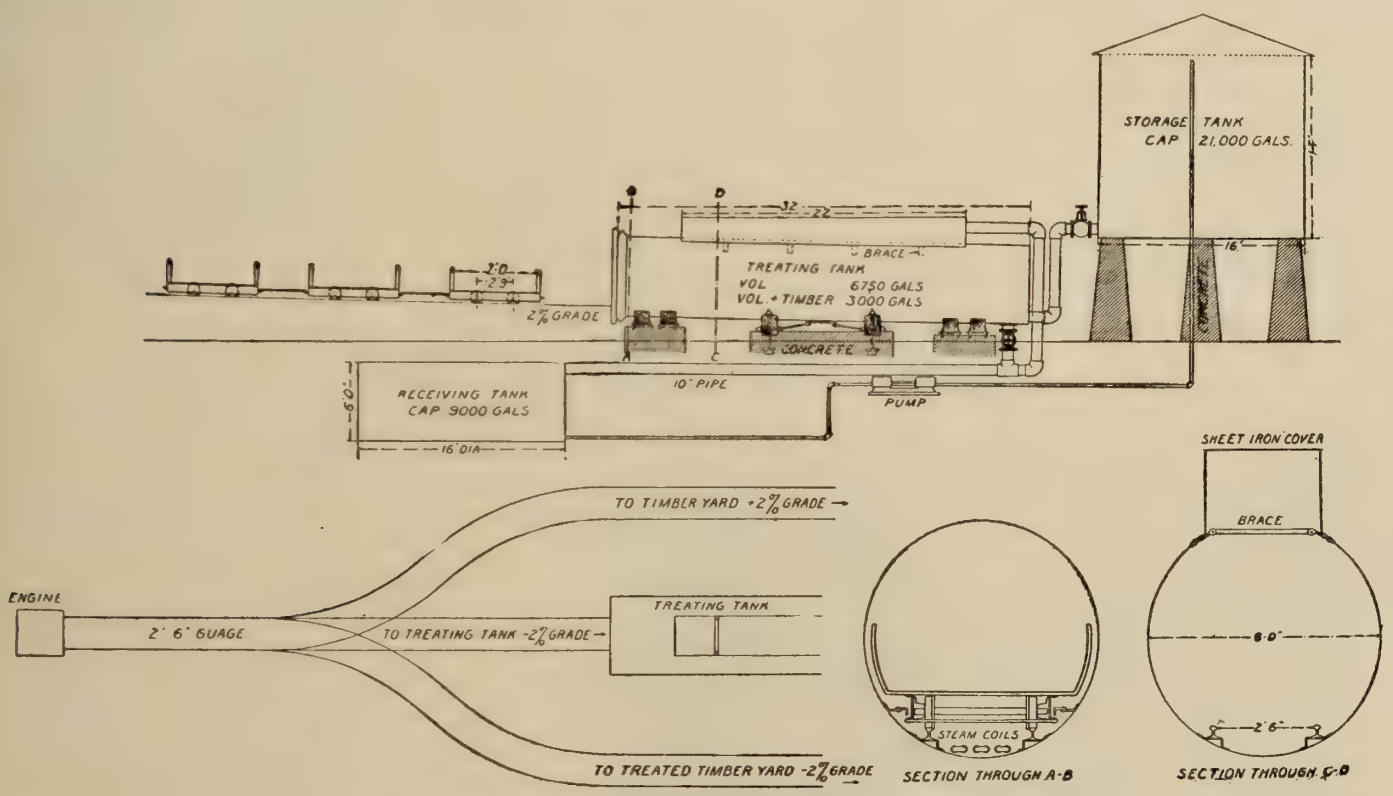


DIAGRAM OF A SMALL COMMERCIAL PLANT FOR TREATING MINE TIMBERS, CROSS-TIES, CROSS-ARMS, ETC.

AMOUNT OF ABSORPTION AND DEPTH OF PENETRATION.

In the treatment of any timber by any process, the added life is directly proportional to the amount of absorption and the depth of the penetration secured. But where an expensive preservative is used, or where only a limited service is desired, it is often necessary to limit the absorption of the preservative and so, in a measure, lessen the penetration. It was in the effort to determine some method by which the amount of absorption and penetration of the preservative could be controlled with a fair degree of accuracy that the true respective values of hot and cold baths were demonstrated.

It is now established that the hot bath should be continued long enough to heat the timber and expand the air through a deeper zone than it is desired to penetrate with the preservative; and that the depth of the pene-

TEMPERATURE.

The temperature used in the open-tank treatment must depend on the nature of the preservative and the condition of the timber. If water solutions are employed, the hot bath should be carefully kept at the boiling point. If the temperature is allowed to fall intermittently during the treatment, the vacuum in the timber will be partially destroyed by the entrance of the preservative, which will obstruct the escape of the air when the temperature again rises. With complex and expensive preservatives, such as creosote oil, the temperature should be kept as low as is consistent with securing the desired penetration, since the loss by volatilization during the treatment is almost directly proportional to the temperature and duration of the hot bath. For this reason the tank should be so constructed that a minimum amount of oil surface is exposed to the air.

the largest percentages of constituents with high boiling points. This is especially true if the character of the timber calls for an unusually severe treatment. In general it may be said that for green timber the temperature should not exceed 230 degrees F. nor fall below the boiling point of water. For seasoned timber the temperature should not be allowed to exceed the boiling point of water by more than 8 or 10 degrees.

DURATION OF TREATMENT.

It has already been shown that the duration of the cold bath depends upon the penetration which it is desired to secure. Porous timbers of small dimensions may be saturated after a comparatively short immersion in the cold bath, while for larger sizes, and for timbers which do not absorb the preservative readily, several hours are necessary. The duration of the hot bath will depend upon the size of the timber, its moisture content, and the ease with

which it absorbs the preservative. In general, however, it may be said that the maximum penetration for green timber can be secured by a hot bath of from eight to ten hours followed by a cold bath of frem eight to sixteen hours; whereas seasoned timber will require only from three to six hours in the hot preservative, followed by a sufficiently long immersion in the cold bath to secure the desired penetration, probably in no case exceeding eight hours.

When the timbers are transferred from hot to cold oil they should be exposed to the air no longer than is absolutely necessary. In treating small timbers, which are easily and quickly handled, it is better to change the timbers from hot to cold oil than to permit the oil to cool or to change the oil in the treating tank.

Application and Limitations of the Open-tank Method.

Any of the preservatives in general use can be applied by the open-tank method, provided that the temperatures are properly controlled. Oils with high boiling points are applied with less difficulty and less loss by evaporation than those with low boiling points. In applying preservatives held in water solution some of the water is evaporated during the treatment, with a consequent strengthening of the solution; but treatment can easily be regulated either by the addition of hot water during treatment, or, better, by using a solution slightly weaker than desired for impregnation.

Herewith is a diagram of a small commercial plant for the treatment of mine timbers, cross ties, or cros sarms. The best results are obtained in the treatment of round timbers on which an unbroken zone of porous sapwood surrounds the more impervious heartwood. For this reason round fence posts are preferable for treatment to split posts, in which the heart-wood is directly exposed. One of the chief advantages of the process lies in the fact that it can be effectively applied to parts of timbers which are especially subjected to rapid decay, such as the butts of fence posts and telephone poles, without wasting preservative on other parts.

Extensive experiments by the Forest Service with fence posts, telephone poles, and mine timbers have given satisfactory results. There is little doubt that the method is applicable to the treatment of small dimension timbers, such as cross arms, underground conduits, shingles, and other wood in small sizes. No difficulty should be encountered in treating cross ties and piling of such woods as loblolly pine, black and tupelo gum, western yellow pine, and lodgepole pine. Fairly good results have been obtained in the treatment of arborvitæ, chestnut, and red oak, but the experiments with these woods do not yet warrant the application of the method to the treatment of piling and ties manufactured from them. The process is being rapidly developed, and it is probable that future experiments will reveal methods of applying it to many other species and purposes.

Though considerable progress has been made within the last few years in our knowledge of the ease or difficulty with which different timbers absorb the preservative under varying conditions, much yet remains to be done. It is therefore unwise at the present time to predict in detail the possibilities of the open-tank method. It is certain, however, that for many forms of timber manufactured from many species this method is practicable in cases where no other process could be employed, and that its general application will make possible the treatment of much larger quantities of timber in the future than in the past.

For those cases to which it is properly applicable, the saving effected by the open-tank method is readily apparent. Not only is the cost of operation and maintenance comparatively slight, but the cost of installation is probably less than one-fourth of that of a pressure-cylinder plant of the same daily capacity. Moreover, the open-tank apparatus may be moved with comparative ease, so that it may more nearly follow the base of supply, with a consequent saving of freight charges. It should be distinctly borne in mind that it is not a universal substitute for the pressure processes, and its future usefulness will largely depend upon the care and foresight which are exercised in its application.

Necessary Apparatus.

The simplest type of open-tank apparatus consists of a vat to be partly filled with a preservative, in which the timber is submerged, and under which a fire can be built. An apparatus of this kind may be placed on wheels and drawn from one place to another. However, where the saving of time is essential and the treatment is conducted on a larger scale, additional apparatus is necessary for the most economical and convenient treatment. If the timbers are of such size and form that it is practicable to change them from the hot to the cold bath, two tanks are necessary, one to contain the hot preservative — preferably equipped with steam coils—and the other to contain the cold preservative. For timbers too large to be transferred during treatment, the plant should consist of a treating tank, a supply tank, and a receiving tank. This equipment will make it possible to shorten the treatment by running out the hot liquid into the receiving tank and admitting the cold liquid simultaneously. The preservative can later be pumped back into the supply tank.

In most cases a tank built from three-sixteenths or one-fourth inch iron or steel will give the best results. Where steam can be supplied at a nominal cost, steam coils are preferable for heating.

GOOD WORK FOR TEN HOURS.

On Saturday, the 22nd of June, the J. B. Snowball Company, of Chatham, N.B., sawed at their mill 218,419 superficial feet. They have three gangs with an edger to each. This is pretty good sawing, and beats by 9,000 the best day they had last year.

THE WORLD'S SUPPLY OF TIMBER.

In consideration of the steadily increasing consumption of wood throughout the civilized world, pessimists see a timber famine in sight, and are already busily speculating as to the probable effect on civilization of that calamity. The history of the world is too prolific of examples of man's capabilities of discovering or inventing substitutes for exhausted or depleted natural products to warrant anyone indulging in gloomy forebodings of a twentieth century failure in this respect.

Nevertheless, it is a fact that the subject of reforestation deserves greation attention than it has in the past received. Germany, Finland and France are now forced to import 13,000,000 cubic metres yearly, and, among the countries delivering this enormous supply, Canada takes the foremost place. There can be no question about the fact that in Europe there are still enormous untouched supplies of wood, but in connection with this statement must also be taken the fact that woods grow usually, and especially in the northern countries, very slowly. Centuries will be needed to produce other trees of equal size and value, if these are once destroyed.

The United States, which once had the largest woods in the world, cannot now, in spite of its area of 512,000,000 acres, cover its own needs within the borders, but have to turn to Canada for a part of it. Canada commands woods estimated at 810,000,000 acres, and has no doubt the largest tracts of wood lands of any country in the world. In spite of the fact that there are yet wood lands awaiting the first cutting, especially in China, Corea, India and in South America, it is nevertheless safe to say that the question of how to keep intact the world's sources of wood supply for future consumption is well worth the serious attention of the civilized world.

SAW MILLING LEADS ALL INDUSTRIES.

A return of the manufactures of Canada by classes, as shown in the official census of last year, goes to show that the saw milling industry, with an output of $68,229,920, is the largest single factor among the manufactures of the Dominion. In practically all the staple industries there has been normal progress, whilst in certain instances the advance has been remarkable. The value of lumber products has doubled.

ELECTRIC KILN FOR LUMBER.

An electric kiln for drying lumber is the new invention, by E. C. Luster, of St. Louis, which is to be installed at once in a Beaumont lumber mill. It is the only thing of its kind in existence and the young electrical engineer who has perfected it claims that it will drive the steam kiln out of business, both on account of being far less expensive to install and operate and because it is more convenient to handle, or to locate.

Every word in an ad costs dollars—why throw away good dollars on words which don't help the selling?

THE POWELL WOOD PROCESS

With a view to the exploitation in Canada of that method of wood preservation known as the "Powell Wood Process," Mr. Ernest H. Scammell, for the past two and one-half years secretary of the Powell Wood Process Syndicate, London, England, has recently come to Toronto and will spend some time in this country. Seen by a representative of THE CANADA LUMBERMAN, Mr. Scammell ex-

MR. ERNEST H. SCAMMELL.

plained the method in which he is interested and which he is confident will find favor with Canadian lumbermen.

"The process consists," said Mr. Scammell," in impregnating the wood with a saccharine solution, to which, for particular purposes, are added certain antiseptic substances or chemicals. The wood is subsequently artificially dried and is then quite ready for use.

"Any kind of wood may be treated in this manner. A log may be cut into planks on the same day as the tree is felled, put through the process, and, after drying, is more efficiently seasoned than as if it had been dried naturally for years. In addition to this it is thoroughly sterilized and rendered proof against dry rot and decay.

"The requisite plant consists of open tanks of suitable dimensions, heated preferably by steam pipes, capable of raising the liquor to boiling point; ordinary drying chambers and storage tanks for holding the liquor.

"The wood, which is not subjected to any external pressure or vacuum at any stage of the process as it is received, is immersed in a cold solution in open tanks. This solution is gradually raised to boiling point, and is maintained at this temperature for a certain time, depending on the size and density of the wood. The whole is then cooled and the wood is removed and placed in a drying chamber. When sufficient desiccation has taken place the chamber is gradually cooled down, and the wood is ready for immediate use. The time occupied in the first part of the process is only a few hours and in the whole treatment a few days in general, though in special cases and for large sizes it may be extended to three or four weeks.

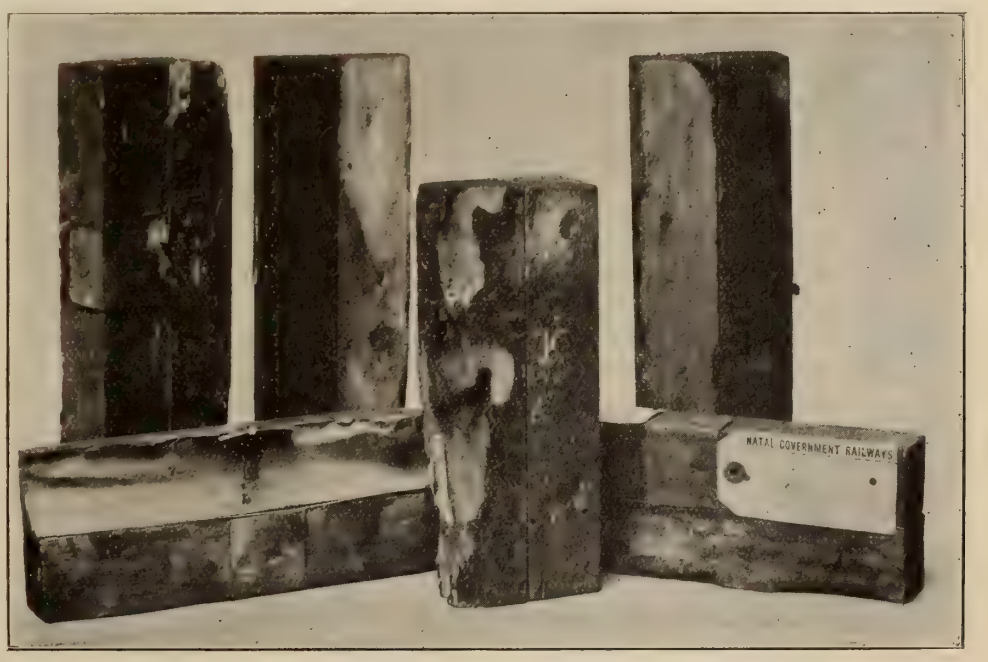
The action which takes place is as follows: As the temperature of the solution in which the wood is immersed is raised, the air in the wood expands, the greater proportion escaping in a series of bubbles. As a saccharine solution boils at a slightly higher temperature than water, the moisture in the wood is converted into vapor and escapes along with the air. While cooling the solution is rapidly absorbed by the wood and penetrates to every part of it. After drying it is found that the saccharine matter which remains has been so assimilated by the tissues of the wood as to be invisible under the microscope, either as crystals or as drops of syrup, though chemical anaylsis proves its presence.

"Where wood has to be used in a damp place, or where wet and dry conditions alternate, it is advisable to add a strong antiseptic to the ordinary saccharine solution. Also, where the wood is likely to be attacked by insects, it is necessary to impregnate it with some chemical which shall be deleterious to insects, but innocuous to human beings. Pieces of soft Baltic deal have been rendered white-ant-proof in this way and although the most drastic tests have been carried out by government officials and others, in such countries as India, Australia, South Africa and the Philippine Islands, in no case has a failure been recorded.

"The process is comparatively inexpensive, it being one of the cheapest, if not the cheapest, on the market. Based upon the price of sugar and its by-products in England, where a heavy duty has to be paid, the cost of the materials used runs from one to four cents per cubic foot, or say from 84 cents to $3.35 per thousand feet of lumber, the lowest figure representing wood for outside purposes, such as railway ties, paving blocks and rough constructional work, and the higher prices the better class woods for furniture manufacture, etc. In England, where about $75,000 has been already spent in perfecting the process, a new company to acquire the British rights is being formed, and in Australia it has been worked commercially for over a year with excellent results.

"In Canada it is my intention to form two companies, one in Eastern Canada and the other in British Columbia, to acquire the sole rights for the Dominion. These companies will then let the use of the process to individual lumbermen and manufacturers, as well as erect works of their own. I am so convinced of the value and utility of the process to this country that I have severed my connection with the syndicate in London in order to take over and exploit the business here. The process is certainly a money-maker and will, I am sure, appeal to the lumber industry and all who work in wood."

The accompanying illustration shows six pieces of "Powellized" soft wood, bolted to six pieces of similar wood untreated. They were submitted entire to the attacks of white-ants, by Government officials in Natal, India and Singapore, and were removed before the untreated pieces were wholly consumed. The treated pieces were not eaten at all. The original of the central pair can be seen at Mr. Scammell's office, 32 Church street, Toronto.



SIX PIECES OF "POWELLIZED" SOFT WOOD BOLTED TO SIX PIECES OF SIMILAR WOOD UNTREATED.

Rome was not built in a day, and large business should not be expected from a single advertisement—or from two or three at most. "Constant dropping wears away the stone," and it is the constantly appearing advertisement, small or large, that eventually brings in the greatest volume of business. It's the persistent, persevering, "hammering-away-at-it" advertiser—backed up, of course, with an article that is genuine—that succeeds in the long run. The spasmodic jump-about advertiser gets returns also, but not in the same proportion—for the money spent—as does the man who chooses his medium carefully, and stays with it long enough to give it a fair trial.

THE

Canada Lumberman

AND WOOD-WORKER

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ADVERTISING RATES ON APPLICATION.

THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in every part of Canada in the lumber, wood-working and allied industries. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication in the WEEKLY LUMBERMAN the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN AND WOOD-WORKER is undoubtedly the most direct and profitable advertising medium. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

MORE COMBINE TALK.

Following the investigation held some months ago by the Federal Government at Ottawa to determine if possible the existence of an illegal lumber combine in the west, it is now announced that the Alberta Legislature proposes resuming the inquiry in the near future. It is held in the west that the report of the Parliamentary Committee of the House of Commons was so indicative of there being irregularities in the lumber industry that the Provincial Government, represented by Attorney-General Hon. C. W. Cross, has decided to institute proceedings against the Lumber Dealers' Association for an alleged combine against trade. In this connection Mr. Cross is credited with the following statement:

"The Provincial Government has kept in touch with the investigation held at Ottawa in March and April last concerning the prices charged for lumber in the Provinces of Manitoba, Alberta and Saskatchewan, and as early as possible after the enormous mass of evidence was taken in that investigation, my Department was put in possession of a copy of that evidence and a copy of the draft report of the subcommittee, which report was finally adopted by the committee appointed by Parliament to investigate this matter. The evidence given in the investigation extends over 774 closely-printed pages, and is necessarily full of detail, including price lists, correspondence, freight tables, and a mass of other material that requires to be very closely examined in order to ascertain what the facts in connection with this matter really are.

"Since the receipt of the evidence the Deputy Attorney-Generol has been continuously engaged in sifting and analyzing it, so as to be in a position to advise the Government as to what action should be taken in the premises. As a result of the examination of the evidence so made, the Government have concluded that the facts disclosed call for judicial investigation. It would be improper for me at this stage to say what I think the result of the laying of a charge in connection with the lumber combine should be. This is for the court or jury to decide before whom the matter ultimately comes, but it cannot be doubted that the question, whether there is an illegal combination between the lumber dealers, should be made the subject of judicial inquiry by the laying of a charge of contravention of the sections of the code in relation to conspiracies in restraint of trade in the interests of the general public.

"Unfortunately, it is practically impossible for the Government of this province, acting alone, to indict the Alberta Retail Lumber Dealers' Association as a body for conspiracy with the Mountain Lumber Manufacturers' Association of British Columbia, because the latter association is not within our jurisdiction, and it must rest with the Government of British Columbia to take action against them, if they consider it their duty to do so. I say unfortunately because a judgment of a court upon the subject as to whether the arrangement, if the arrangement that exists between these two associations, is illegal and a contravention of the criminal code, would not go to the root of this whole matter. The question, however, will doubtless be decided incidentally in the course of the prosecution which it is the intention of the Government to institute against the executive officers of the Alberta Lumber Dealers' Association.

"By reason of the fact that all the exhibits, including the lists of the members of the Alberta Lumber Dealers' Association, were handed back to the witnesses by the special committee of Parliament and were not printed in the report of the evidence, the Government is not at present in possession of evidence as to what firms compose this association.

"The object, however, of the prosecution, which as I have already stated, is to bring before the courts the question of the legality of this combination, if such exists, will be for practical purposes sufficiently decided by the indictment the Government proposes to lay against the executive officers of the association."

Apropos of Mr. Cross' statement regarding the attitude of the British Columbia Legislature toward the Mountain Manufacturers' Association, the probability is that Attorney-General Bowser of that province will take no action in conjunction with the Alberta Legislature. Mr. Bowser no doubt realizes that a legal action, such as must be taken by his Government if the investigation is to be searching, must be a serious matter. Moreover, western opinion is not slow in declaring that an inquiry into the methods of the Alberta retailers will be incomplete unless it also includes a searching of the relations existing between the retailers and mills from which they have been obtaining their stocks. The Albertans claim that they are merely selling at prices based upon the high rates demanded by millmen.

It is rather difficult at this stage of the proceedings to form any idea of the extent to which the western public are going in support of the Attorney-General of Alberta. Certain it is that those who are urging an investigation are blaming the millmen for voluntarily forcing up prices which have, as a matter of fact, been raised for economic reasons over which neither they nor the public have any control. Apparently the millmen are concerning themselves but little over an accusation of excessive charging which might equally as well be applied to the manufacturers of countless other articles entering into daily consumption. A cursory examination will serve to show that the prices of lumber have not advanced relatively faster than have the prices of farm products or of any one of hundreds of other articles of manufacture.

For the lumberman stumpage values have advanced rapidly in the past few years, wages are continually rising, supplies of all kinds are becoming dearer. Everything the millman needs, whether it be live stock, steel rails, cars, locomotives, fodder for his horses, mill supplies, machinery, manual labor and its sustenance, all are increasing rapidly in value year by year, and yet the public apparently would see the finished lumber remain at unchanged prices irrespective of such insignificant details as profit and loss. While the lumber world is not wholly free from little local pools and private undertakings among limited numbers of men in limited fields, it is undoubtedly straining the point to see behind the present inflated prices of lumber in the west anything but one of the many features of our national growth.

If the lumber trust hunters continue in their zealous endeavors to protect the public they may assume at once that they have before them a practically unlimited field wherein, if much increased prices are indicative of combines, they will have their work cut out for some years to come.

EVILS OF CONSIGNMENT.

Amid the mass of unusual features which, during the present season, have developed in the lumber industry in Canada, none has given cause for more anxiety, particularly in the Maritime Provinces, than has the growing practice of "consigning" lumber to commission brokers at British or Eastern States ports. At present the consignment "evil"—no milder term will suffice—bids fair to seriously impair the well-being of the lumber industry in Nova Scotia and New Brunswick. If the home market were in a less healthy condition, some excuse might be found for the anxiety displayed by manufacturers in Eastern Canada to rashly consign their product to foreign commission brokers at the risk of pecuniary loss and the possibility of doing grave injury to the lumber industry, but when it is considered that there is not the slightest reason for fearing a material decline in the demand for Eastern spruce, pine and hemlock, it is rather difficult to realize why sane men will persist in deliberately sacrificing their own best interests and jeopardizing what would otherwise be a healthy industry.

At the present time the British markets are flooded with spruce deals from New Brunswick and Nova Scotia, and prices, which a short time ago were satisfactory, are to-day unreasonably low. The combined holdings of Liverpool and Manchester at the beginning of July were nearly double what they were at the same date last year, Manchester having 19,260 standards as compared with 7,080 twelve months before, while 15,000 standards are said to be still due to arrive. The actual decline in the prices of spruce deals is from 10 to 15 shillings a standard. One exporter of this material states that,

whereas last winter he was getting £8 7s. for spruce, he is now able to obtain only from £7 5s. to £7 15s. In spite of this extremely unsatisfactory condition, spruce deals continue to be shipped from all the regular ports in New Brunswick and Nova Scotia, on a scale which the "Timber Trades Journal" declares is much greater than the demands of the country warrant. There is a lack of confidence that even the present unsatisfactory position will be maintained at its present standard.

In the face of such a statement the only rational course of procedure should be an immediate cessation of exports on the part of the Canadian shippers. If such were the case, the English brokers might reasonably be expected to refrain from pressing on unwilling customers a commodity which the latter may very well presume will drop to even lower figures. In fact, if spruce continues much longer to flood the English market as it has recently been doing, buyers on the other side may be forgiven if they assume that a little later on they will be able to buy landed stock more cheaply than if they paid c.i.f. rates. In London landing charges alone amount to $5 to $6, and, with a few months' rent and interest, the total charges soon reach the $10 mark, and naturally it suits buyers to simply pick up stocks as they require them and let the broker or shipper pay all the charges which they themselves would otherwise have to incur.

Moreover, it is not only in Britain that the consignment evil has had its effects. In New York and other Eastern States ports there are Canadian firms manufacturing in Eastern Canada and having selling offices across the line, and these firms have recently been confronted with a situation that bids fair to rival the present condition of affairs in Britain. Consignments of Canadian lumber, marked "cargoes," are shipped down to commission brokers and are almost invariably received with indifference. Buyers do not care to make an offer for such, whether they need the lumber or not. In the former case they may make a ridiculous offer that means a dead loss to the consigner or they may state that they do not want to buy at any price. The broker is offering it to everyone by circular letters or through solicitors and if no offers are received he eventually becomes desperate and begs customers to make some kind of offer, and then has no other option than to take the best price available, regardless of the shipper's interest, he being always protected on his commission. Cases are cited where Nova Scotia cargo shipments have been sold on the New York markets at an actual loss to the consigner.

The millmen must readily see that such a condition of things can have but one remedy. If they would withhold their stocks it would not be long before buyers would be compelled to change their tactics and search for lumber instead of having it dumped down before them at practically their own prices. Lack of confidence among manufacturers militates to the greatest extent against such co-operative action, but surely, where the market is placed in jeopardy and financial losses must speedily follow, concerted action can and will be taken. That opinion is unanimous regarding the evil of consignments was emphasized in a peculiar fashion in England last month when London importers boycotted an Archangel cargo of deals which was submitted for sale at auction without reserve by Messrs. Churchill & Sims. To again quote the "Timber News":—

"Acting in concert, the leading merchants abstained from bidding, with the result that the goods were sold at disastrously low prices. It is evidence of the strong feeling which exists that importers stood by while goods that they had plenty of room for in their own stocks were slaughtered to outside buyers at ridiculous figures. Lest any should imagine that the bottom has dropped out of the market, we hasten to point out that the low prices fetched were entirely due to the voluntary abstention of the importers. Their action reacts upon themselves, when their own

Mr. Isaac Fraser Noxon,
Canadian Sales Agent Louisiana Red Cypress Company of New Orleans.

customers confront them with goods bought at about £2 a standard less than the landed cost of the goods they have themselves bought to arrive. But the immediate effect, however unfortunate, has no weight in comparison with the good which the abstainers seek to bring about. If the boycott convinces shippers of the determination of London merchants to actively resist 'consigning,' and if it warns them that they are likely to be heavy losers by the practice, much good will have been done.

"A cargo or two may be expected at the fag end of the season, when the market has declared itself for good or ill; but to have regular dimensions dumped upon us before the consignees of contract stuff have received any appreciable portion of their purchases is a serious hardship. It is grossly unfair, and the metropolitan buyers are giving evidence that they do not mean to take it lying down. Whatever is done by small and unimportant shippers, we hope that the large and influential exporters will not do anything to call for a repetition of this week's action by the people who, after all, are their best and largest customers."

It is to be hoped that the exporters will do something to remedy the present state of affairs even to the extent of boycotting, if necessary, the brokers who encourage such consignments. Canada has become a very important factor in supplying lumber to the United States and Great Britain, and it seems strange indeed that such business cannot be handled to yield a profit. If there was not a single consignment made within the next 60 days it would simply revolutionize present conditions and put values where they belong, and we urge that immediate action be taken by exporters to render this curtailment possible.

CANADIAN SALES AGENT FOR CYPRESS.

..Canadian Sales agent for Cypress ... ..

We take pleasure in announcing that Mr. J. F. Noxon, whose portrait we publish herewith, has been selected by the Louisiana Red Cypress Company of New Orleans as their Canadian representative to succeed Mr. Ray H. Stilwell, recently resigned. Mr. Noxon comes to the field well equipped to represent this large and up-to-date company, coming direct from their office and mills in Louisiana with full knowledge of the character of the stock, grades and manufacture.

Isaac Fraser Noxon was borne at Hills Ferry, Cal., July 16, 1882, and later, 1886, moved with his parents to Kingston, Ont., and in 1891 to Duluth, Minnesota. He attended school at both Kingston and Duluth, graduating at the Duluth High School class of '98, attending Duluth Commercial College for the next year. He entered the lumber business in the summer of 1899 with the St. Louis Lumber Company, of Duluth, first as bookkeeper and later in various other capacities. When the plant closed down in January, 1905, on account of the exhaustion of the timber supply, Mr. Noxon was assistant superintendent. He then toured the Pacific coast, visiting many lumber manufacturing points, going to Louisiana and entering the Cypress business in February, 1905, at the mills as yard foreman, shipping clerk and other important capacities until the formation of the Cypress Selling Company, when he was placed in charge of the order department, and continuing with the Louisiana Red Cypress Company until the assumption of his present duties as their Canadian sales agent.

Mr. Noxon is of a whole-souled, genial disposition, the kind that makes friends readily and never lets them go. We bespeak for him much success in his new field of operation.

THE "HANDBOOK" OF TREES.

A new and attractive book about to be published, and in which our readers will doubtless be much interested, is the "Handbook of the Trees of the Northern States and Canada," by Romeyn B. Hough, B.A., author and publisher, Lowville, N.Y. The book is now in press, and will be a most beautiful production of its kind. It will be photo-descriptive of the leaves, fruits, winter twigs and typical barks of each species, and magnified wood structures of the principal species, with maps indicating distribution and full text. One unfamiliar with botany can identify the trees by comparison with its illustrations.

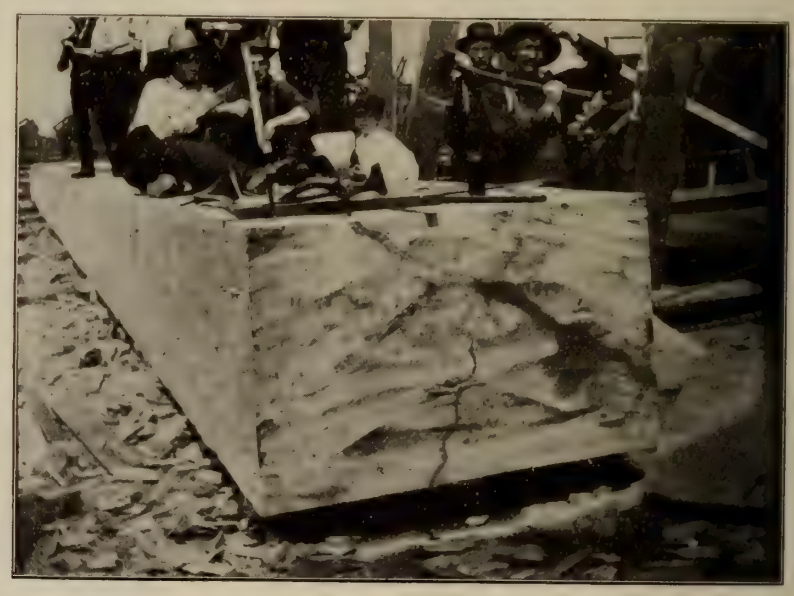
WESTERN CANADA

Western Offices of The Canada Lumberman,
615 Hastings Street, VANCOUVER, B. C.: 720-721 Union Bank Building, WINNIPEG, MAN.

A MONARCH OF THE FOREST.

What is the largest stick of timber on record ever brought to Vancouver was at the saw mill of the Pacific Coast Lumber Mills recently. The log, as brought to Vancouver, measured 7 feet 6 inches at the butt, and 5 feet at the top, and was 90 feet in length. Being too large to put through the saws, it was hauled up on the marine railway and hewed to the required size. When squared it measured 34 inches x 54 inch x 80 feet long, clear and free from knots. It is to be taken to Orville, California, where it will be used for a dredge anchor for the Guggenheimers' Gold Dredging Company. The photographs here shown were taken and supplied by courtesy of Joseph Doxsee, of Vancouver.

LARGE STICK B.C. FIR AT PACIFIC COAST LUMBER MILLS, VANCOUVER.



SHOWING LOG READY FOR SHIPMENT TO ORRVILLE, CAL.

HASTINGS COMPANY'S NEW MILL.

The Hastings Shingle Manufacturing Company, of Vancouver, have their new mill, on the site of the old mill No. 1, well under way. The mill building is practically completed, and some of the machinery has already been installed. They expect to be running by the first of October at the latest.

This mill will give the company an additional output of about 80,000 feet of lumber per day. The mill building itself measures 312 feet from the jack ladder to the extreme rear end, and 40 feet wide for the first half, and 80 feet wide for the latter half of the building. Adjoining this is another structure measuring 80 feet x 60 feet(which contains the large timber sizer, with transfer equipment to convey the lumber to and from it.

The equipment consists of a single cut Waterous band mill, with 9 foot wheels carrying 14 inch saws, a Hamilton rope feed carriage and Simondson log turners, a Mershom band re-saw with 66 inch wheels carrying 8 inch saws, a 60 inch Hamilton edger, a 32 inch x 8 inch gang saw, manufactured by Giddings & Lewis, and a McGregor-Gourlay timber sizer 16 inches x 30 inches.

The power plant consists of a battery of six boilers, each 60 inches x 16 feet, an Atlas twin engine for driving the mill, and a Cunningham twin engine for operating the carriage.

A new planing mill building 80 feet by 100 feet has been erected, and the machinery formerly used in the old building is being installed. This will be operated by a new Atlas engine 16 inches x 22 inches. The upper floor of the building will be utilized for a sash and door manufacturing plant which is to be installed. The entire plant has been designed by and construction thereof carried on under the supervision of Mr. E. H. Newton, the mechanical superintendent of the Hastings Shingle Manufacturing Company.

MANUFACTURING ENTERPRISE AT WARDNER, B.C.

Another new concern has come into existence at Warner, B.C., being the firm of Messrs. Parker & Thorp, railroad tie manufacturers. Their limits are located on the Shookumchuck river, tributary to the Kootenary river. They consist almost entirely of tamarac, there being in all about 20 square miles of standing timber.

The mill is located on the Kootenay river, about two miles west of Wardner. The mill building is frame, with iron roof, and measures 40 x 100 feet. This is divided in two, one-half containing two Inglis boilers, producing 150 horse-power, and the other half one Inglis engine of 125 horse-power. The mill itself contains a Madison Williams circular saw mill of latest design, a three-block carriage with Seule steam feed and the steam setworks, and a tie slasher. The mill is also equipped to handle the by-product, consisting of slabs from the logs, which are run through a "Tower" edger located on the ground floor of the mill.

The special feature of this tie manufacturing mill is the loading equipment, consisting of several hundred feet of travelling chain, thus enabling the handling of ties in the quickest and most expeditious way. The loading platform is 32 x 300 feet, and is elevated to a height above the top of the cars, being specially designed to load the ties direct into the cars, in the event of the cars being full, to carry the ties over above the cars to the piling ground on the other side. The capacity of the mill is about 3,000 ties per ten hours, or 6,000 when a double shift is on.

The members of the firm are E. G. Parker and William Thorp, both gentlemen having previously been engaged in business in the Lake of the Woods country.

THE EAST KOOTENAY LUMBER COMPANY'S NEW MILL.

Among the many new saw mills on the Crow's Nest branch of the C. P. R. that have commenced cutting this year, that of the East Kootenay Lumber Company at Jaffray ranks with the finest. This company, whose head office is at Cranbrook, is operating three mills in all, one at Ryan, another near Cranbrook, and the Jaffray mill.

The main building of the Jaffray plant is 30 x 130 feet, the front end facing on a small lake, which serves as a mill pond. Adjoin-

ing the south side of this building, about the centre, is the engine and boiler house wing, which is 40 x 60 feet. Back of this again is the lath mill wing, 24 x 24 feet. On the north side, near the front, is the filing room wing, 20 x 30 feet.

The mill is equipped with a double cut Hamilton steam tension band mill, with 8-foot wheels, carrying 12 inch Simonds saws. The log deck is complete with steam operated niggers, loaders and kickers. The carriage is a three block, gunshot feed carriage of Hamilton manufacture. Back of the band mill, and somewhat to the left, is a 5-saw "Garland" edger. There are live rolls feeding the lumber to the edger, and transfer chains carrying it from the edger to the trimmers. Leaving the trimmers, the lumber drops automatically on to live rolls and is conveyed a distance of about 200 feet to the sorting table, which is 125 feet long. The upper grades are there sorted off onto rollers, thence on to "roll-off" wagons and conveyed to the piling grounds. The lower grades, consisting of dimension, shiplap and common boards, are sorted off the sorting table on to friction chains, which are operated at will by the planer men. There are three planers in use for handling this lumber, one planer being located at each end of the friction chains, the material being dressed while green.

The planing mill proper, where the better grade lumber is planed and finished after it has been air dried, is located about 25 feet away. This building covers an area of 36 x 64 feet, and contains two matchers, one sticker, rip saw and band re-saw, besides the usual smaller machinery. The planers are fitted up complete with blower and separator systems. The product of the company's mills at Cranbrook and Ryan is also finished up here.

The power plant of the mill consists of four 60 inch x 14 feet Waterous boilers, automatic feed and induced draft systems, operated by a 100 inch fan. This gives a total of 300 horse-power boiler capacity. The saw mill is driven by a pair of twin engines, 16 x 18 inch cylinders, of Waterous make. The planing mill is driven by a 16 x 18 tangye engine from the Stuart Machinery Company. This engine is located in a separate building adjoining the planing mill.

The daily output of the East Kootenay Lumber Company's three mills is about 150,000 feet. They had five logging camps in operation during last winter, getting out in all about 10,000,000 feet of logs and ties. A new logging railway has been built this year at Jaffray, extending from the mill about four miles into the timber limits. A new Shay locomotive has been placed on this run.

NEW SHINGLE MILL.

The new shingle mill for the Brunette Sawmills, Limited, Sapperton, B.C., which is being erected to replace the one burned down a few weeks ago, is now almost completed. This mill is said to be one of the most complete and up-to-date shingle mills on the Pacific coast. The main building itself is 36 feet by 86 feet, and adjoining this is a structure for the drag saw equipment 36 feet by 48 feet. Situated about 40 feet from these buildings is a 24 foot by 40 foot boiler house of metal construction. The plant will consist of six Johnson-Schaake shingle machines. The power plant will consist of a 72 inch by 18 foot boiler, made by the Canada Foundry Company, and a 16 inch by 20 inch Hamilton engine.

A new and novel feature of this plant will be a Mathews gravity conveyor, to be used for carrying the bunches of shingles from the packers to the dry kiln trucks, the dry kiln being situated about 100 feet away from the shingle mill.

The erection of the plant and the installation of the equipment has been entrusted to the care of Mr. F. L. Johnson, of New Westminster, and it is expected to be in operation by October 1st.

NEW SAW MILL AT NEW WESTMINSTER.

The City of New Westminster, B.C., is not only close to Vancouver geographically, but, considering its proportionate size, is a close second to Vancouver in the number of industries within its radius. The chief amongst these is, of course, the lumber industry, there being about ten mills in operation on the Fraser river at this point. Among the latest of these to commence operations is that of the Small & Bucklin Lumber Company, a mill which first commenced operations last year.

This plant occupies about 20 acres all told. The mill building itself is 56 x 240 feet, the main floor containing a single cut, 9 foot

SAW MILL OF THE SMALL & BUCKLIN LUMBER COMPANY, NEW WESTMINSTER, B.C.

wheels, Allis band mill, carrying 15 inch saws; a five-saw Hamilton gang edger; a twin engine feed carriage; steam log loader and niggers; roll feed band re-saw, Berlin manufacture, and a Berlin timber sizer 14 inch x 24 inch, with a full complement of live rolls, trimmer saws and slashers.

The planing mill machinery—which is at present located on the ground floor, underneath the saw mill—consists of two No. 94 Berlin planers and matchers, one heavy Berlin moulder, circular rip saw, cut-off saws, wood lathe and band scrool saws, etc.

The company expect to erect a planing mill building during the coming season. Their dry kilns have a capacity of 250,000 feet.

The power plant comprises three 72 inch x 19 foot boilers, with Dutch ovens and induced draft, and a pair of 20 x 24 inch engines.

The boiler house is in a separate building, alongside of the main mill.

The company have facilities for water shipments and rail connection with the Canadian Pacific and the Great Northern Railways. The president of the company is Mr. George Small, Mr. E. H. Bucklin being secretary-treasurer and general manager.

Up to the time of writing, the company have purchased their log supply from dealers, but after September they expect to be supplied from their own camps.

NEW MACHINES.

The Schaake Machine Works, Limited, of New Westminster, are putting out a new drag saw machine, a power bolter (or splitter), and a knee bolter. These three machines, which have just been placed on the market, are greatly improved in construction and design. They are designed to better stand the wear and tear to which they are subjected owing to the heavy timber they are used on. Heretofore machines of this character have been a little on the light side, and did not stand up to their work as they ought to. The new machines have already made a record for themselves, one day's sales amounting to four complete sets to four different purchasers.

The Johnson-Schaake shingle machine still continues to hold its own, the 1907 model selling faster than ever. Among the recent sales of this machine were six to the Brunette Sawmills, five for the new mill being erected by Mr. Hugh McDonald and associates, five to the North Arm Lumber Company at Eburne, three to the Imperial Shingle Company of Vancouver, and two each to the Abbotsford Shingle Company, J. W. Davis & Son of Bonaccord, and W. E. Laking of Cloverdale. In nearly all these cases the complete running equipment was included.

FOUNDRY ENTERPRISE.

The Empire Manufacturing Company, Limited, Vancouver, B.C., a British Columbia incorporation of the Phoenix Engine Works, of Seattle, have opened up offices in the Vancouver Storage Company's block, 552 Beatty street. They have installed a temporary work shop in the basement of the building, where they are at present turning out "Phoenix" logging engines, and taking in repair jobs from mills and logging camps. The company are erecting their permanent shops on the south shore of False Creek. The first building to be erected will occupy a space 60 x 120 feet. This will at first contain their entire working plant, but later on this building will be used for foundry purposes only, and new machine shops, assembling rooms and warehouse will be built.

The personnel of the company consists of Messrs. J. F. Smith, president and general manager, W. F. Brown, secretary-treasurer, and A. E. Charlesworth, vice-president and mechanical engineer.

HOO-HOO IN BRITISH COLUMBIA.

A ROUSING CONCATENATION HELD AT VANCOUVER LAST MONTH.

On Friday, August the ninth, the mystic Black Cat again held court on the roof, in Vancouver, when the timorous purring of thirty-two unregenerated kittens was mingled with the yowls and caterwauls of nearly a hundred old cats. The session took place in O'Brien's Hall, Hastings street. Snark J. D. Moody was again in evidence as leader of ceremonies, and he was capably and enthusiastically assisted by a coterie of able-bodied Toms from Vancouver, New Westminster and the Puget Sound cities. "Extra special" attention was given, in the initiation process, to J. A. W. Bell, R. A. Power, V. M. Dafoe, A. J. Sloan and J. B. Beard.

After the initiatory part of the concatenation, which occupied about three hours, the pace was set for the Hotel Vancouver, where a feast worthy the Hoo-Hoo Order had been provided. When justice had been done to the good things provided, a number of toasts were proposed and drunk, heading which was the usual toast to King Edward, followed by one to President Roosevelt, proposed by Mr. R. H. Alexander. Three cheers and a tiger were heartily given for Mr. Moody. The evening was further enlivened by songs by Messrs. G. F. Gibson and Louis Blackman, and recitations by Mr. John Boyd, of Boyd, Burns & Company, of Vancouver, and Mr. H. J. Miller, of the H. J. Miller Lumber Company, of Chehalis, Wash.

The following gentlemen were officers for the evening:

Snark—J. D. Moody, manager Vancouver Lumber Company, Vancouver.

Senior Hoo-Hoo—F. G. Horton, manager Graton & Knight Manufacturing Company, Seattle, Wash.

Junior Hoo-Hoo—T. F. Paterson, manager Paterson Timber Company, Vancouver.

Bojum—Arthur J. Hendry, British Columbia Mills, Timber & Trading Company, Vancouver.

Scrivenoter—Geo. Hanbury, manager Fairview Cedar Lumber Company, Vancouver.

Jabberwock—J. M. Ferris, Mitchell & Ferris, Limited, Vancouver.

Custocatian—L. E. Snell, Canadian Fairbanks Company, Vancouver.

Arcanoper—W. B. Terrell, Vancouver.

Gurdon—Fred. A. Shore, buyer Foss Lumber Company, Vancouver.

MEMBERS PRESENT.

E. H. Heaps, president E. H. Heaps (Lumber) Company, Vancouver.

J. H. Hackett, Robertson & Hackett Lumber Company, Vancouver.

R. H. Mckee, president Anglo-American Lumber Company, Vancouver.

E. C. Mahoney, manager Royal City Mills, Vancouver.

R. H. Alexander, manager British Columbia Mills, Timber & Trading Company, Vancouver.

R. H. H. Alexander, secretary British Columbia Manufacturers, Limited, Vancouver.

A. J. Burton, manager A. J. Burton Saw Company, Vancouver.

Geo. A. Walkem, Geo. A. Walkem & Company, Vancouver.

P. M. Lindsay, Geo. A. Walkem & Company, Vancouver.

Geo. A. Gall, Western manager THE CANADA LUMBERMAN, Vancouver.

Hugh B. Gilmour, Waterous Engine Works, Vancouver.

E. F. Mitchell, Mitchell & Ferris, Limited, Vancouver.

Geo. Giles, manager the Vancouver Engineering Works, Vancouver.

C. G. L. Reid, McColl Bros. (Oil) Company, Vancouver.

Percy F. Cooper, manager "Lumberman and Contractor," Vancouver.

William Sulley, superintendent E. H. Heaps & Company, Vancouver.

J. W. Heaps, secretary E. H. Heaps & Company, Vancouver.

James Howard, Ross & Howard, machinery, Vancouver.

R. E. Jamieson, manager Canadian Rubber Company, Vancouver.

E. W. MacLean, president A. J. Burton Saw Company, Vancouver.

O. W. Flowers, Vancouver Lumber Company, Vancouver.

Geo. E. Songars, Vancouver Lumber Company, Vancouver.

J. J. O'Brien, manager Gulf Lumber Company, Vancouver.

I. D. Smith, representative Mason & Gordon (Lumber) Company, Vancouver.

J. Albert Sinclair, lumberman, Vancouver.

A. B. Irwin, manager Pacific Coast Pipe Company, Vancouver.

H. McGinnis, freight agent, G. N. Ry., Vancouver.

J. B. Paine, McLennan-McFeely Company, Vancouver.

J. A. Brownrigg, John O'Brien Logging Company, Vancouver.

Colin F. Jackson, manager C. F. Jackson & Company, Vancouver.

C. D. Goepel, Canadian Oil Company, Vancouver.

S. M. Johnson, Fairview Cedar Lumber Company, Vancouver.

Lumberman GAL 11 ....

M. R. Worth, manager Western Oil & Supply Company, Vancouver.

J. Gourlay, representative McGregor-Gourlay Machinery Company, Vancouver.

John Ross, Ross & Howard, machinery, Vancouver.

R. C. Crakanthorpe, timber inspector, Vancouver.

A. L. Clark, vice-president Vancouver Lumber Company, Vancouver.

G. Y. Spring, representative A. J. Burton Saw Company, Vancouver.

B. J. Parker, E. H. Heaps & Company, Vancouver.

C. M. Rolston, representative Imperial Oil Company, Vancouver.

W. G. McKenzie, manager Wood, Vallance & Leggatt, Vancouver.

W. A. Akhurst, manager Canadian Fairbanks Company, Vancouver.

W. B. Cook, Tterminal Lumber Company, Vancouver.

J. D. Tait, lumberman, Vancouver.

W. E. Wintemute, Vancouver.

C. S. Bradley, Vancouver.

Ernest Walker, secretary Fraser River Sawmills, New Westminster.

F. L. Johnson, New Westminster.

J. A. Cunningham, New Westminster.

E. J. Witherspoon, Port Moody, B.C.

E. M. Heaps, managers Heaps' mill, Ruskin, B.C.

Henry Schaake, manager Schaake Machine Company, New Westminster.

W. H. Welbon, manager Independent Shingle Company, New Westminster.

E. S. Scaton.

VISITING MEMBERS.

Geo. M. Cornwall, publisher "The Timberman," Portland, Ore.

J. W. MacKenzie, representative Chicago Belting Company, Portland, Ore.

F. H. Flatan, Minneapolis, Minn.

M. D. Haire, representative Wicks Bros., Saginaw, Mich.

J. P. Whitney, Whitney Engineering Company, Tacoma, Wash.

H. J. Miller, Snark Western Washington, Chehalis, Wash.

L. A. Marsh, Seattle, Wash.

F. C. Horton, manager Graton & Knight Manufacturing Company, Seattle, Wash.

Thos. Sanders, Seattle.

T. H. Claffey, Seattle.

Geo. E. Youle, vice-president S. A. Wood Machinery Company, Seattle, Wash.

J. H. Beard, representative Graton & Knight Manufacturing Company, Seattle.

T. M. Shields, representative Simonds Saw Company, Seattle.

T. L. Williams, Seattle.

E. H. Jackson, Seattle.

E. R. Ingersoll, New York Central Railway freight agent, Seattle.

John T. Wheatman, representative J. T. Wheatman Saw Company, Seattle.

S. H. Cawston, Pacific Coast Dry Kiln Company, Seattle.

Geo. W. Loggie, Bellingham, Wash.

THE KITTENS.

Geo. F. Gibson, manager Pacific Coast Lumber Mills, Limited, Vancouver.

James Sharpe Emerson, lumber manufacturer, Vancouver.

Adam John Sloan, E. H. Heaps & Company, Vancouver.

Walter Scott, Vancouver Lumber Company, Vancouver.

Charles Stewart, Pacific Coast Lumber Mills, Vancouver.

James Allen Ward Bell, J. S. Emerson Lumber Company, Vancouver.

Francis Jerome Trombly, Vancouver Lumber Company, Vancouver.

Bennet Pike, W. F. Hunting Lumber Company, Vancouver.

Frederick Detlof Becker, W. F. Hunting Lumber Company, Vancouver.

Philip A. Wilson, Gulf Lumber Company, Vancouver.

Charles Bryant Withee, Vancouver Lumber Company, Vancouver.

Philip Spicer, assistant manager Rat Portage Lumber Company, Vancouver.

Charles William Tait, British Columbia manager Globe Lumber Company, Vancouver.

Theophilus Elford, manager Shawinigan Lake Lumber Company, Victoria.

Henry Lovekin Edwards, McLaughlin Lumber Company, New Westminster.

Edgar Hiram Bucklin, Small & Bucklin Lumber Company, New Westminster.

Harold Gladstone Barnet, Barnet & MacDonald Lumber Company, New Westminster.

Lewis Allan Lewis, manager Brunette Sawmills Company, New Westminster.

Fred. Stewart Cameron, Edmonton Logging Company, New Westminster.

George Ewens Whitney, Nebegin Lumber Company, Tacoma, Wash.

Victor Morden Dafoe, ship-builder, Vancouver.

Francis Lockbie Leighton, Vancouver Engineering Works, Vancouver.

Arthur Ludlow Newson, Vancouver Engineering Works, Vancouver.

George Watson Seymour, Canadian Rubber Company, Vancouver.

William Andrew Allen, Canadian Rubber Company, Vancouver.

Henry Kingdon Anstie, Canadian Fairbanks Company, Vancouver.

Raymond Aloysius Power, Evans, Coeman & Evans, Vancouver.

Adolphe Ovila Lapin, representative Schaake Machine Works, New Westminster.

James Braxton Beard, Jewell Belting Company, Seattle, Wash.

Milo Walton, Jewell Belting Company, Seattle.

Stuart Francis Hills, Jewell Belting Company, Seattle.

Lisgar Douglas Cooke, British Columbia manager Chicago Lumber & Coal Company, St. Louis, Mo., Vancouver, B.C.

BIG ROUND-UP OF PRAIRIE HOO-HOO.

..Big round-up of prairie hoo-hoo... .....

The concatenations under the jurisdiction of the Vicegerent Snark of Central Canada—James A. Ovas, Winnipeg—are becoming notable for the great number of the lumber fraternity which they bring together. The big concatenations at Winnipeg and Brandon were overshadowed by the recent event at Regina, where the following efficient staff of officers initiated forty-three prairie kittens into the mysteries of the Great Sacred Black Cat:

OFFICERS.

Snark—James A. Ovas.
Senior Hoo-Hoo—E. D. Tennant.
Junior Hoo-Hoo—S. L. Raymond.
Bojum—H. S. Y. Galbraith.

JAS. A. OVAS, Winnipeg,
Vicegerent Snark for Central District of Canada.

Scrivenoter—L. G. Delamater.
Jabberwock—E. R. Birnie.
Custocatian—A. R. McDiarmid.
Arcanoper—W. F. Hanbury.
Gurdon—C. S. Robinson.

The date of this event was July 31, and the walk through the onion bed began promptly at 9.09. The west have cut out for them a secret mission, and it is this: To obtain more members west of the great lakes than there is in the effete east.

The following were initiated:

Herbert Irving Stevenson, North Star Lumber Company, Elko, B.C.
Wm. Wallace Davidson, Moose Jaw, Sask.
Malcolm Charles Ross, Lumsden, Sask.
Edward James Dobson, Bladsworth, Sask.
Charles Rex Willoughby, Regina, Sask.
William E. Moore, Winnipeg, Man.
Harold Albert Manning, Three Valley, B.C.
Chester Hall Marshall, Regina, Sask.
John Franklin Boyd, Port Moody, B.C.
Thomas Gomer Jones, Wardner, B.C.
Henry Irving Overbough, Winnipeg, Man.
Luther E. A. Smith, Winnipeg, Man.
Alan McKenzie Stewart, Winnipeg, Man.
Lewis J. Palmetier, Winnipeg, Man.
Wm. Layton Bates, Winnipeg, Man.
Alvin Carl Berg, Prince Albert, Sask.
Samuel A. Hamilton, Winnipeg, Man.
LaRoy Hotchkiss, Minneapolis, Minn.
Frederick Wm. Ritter, Regina, Sask.
Charles C. Stewart, Regina, Sask.
James Rutley, Winnipeg, Man.
Henry Goodall, Warman, Sask.
Frederick C. Manning, Revelstoke, B.C.
Percy J. Bedson, Toronto, Ont.
John A. MacLean, Fernie, B.C.
James Mayhood, Barnet, B.C.
John Brown Evans, Saskatoon, Sask.
W. G. Reddingins, Davidson, Sask.
George Smith, Balgonie.
Richard H. Catherwood, Saskatoon, Sask.
Arnold E. Lockerley, Regina, Sask.
George Henry Stacey, Regina, Sask.
John Leslie Stewart, Regina, Sask.
James Hope Nasmyth, Vancouver, B.C.
Charles H. Parks, Regina, Sask.
John Fraser, Winnipeg, Man.
Chester Charles Graham, Regina, Sask.
James Edward Armstrong, Regina, Sask.
Edwin D. Baker, Moose Jaw, Sask.
James Malcolm Singular, Moose Jaw, Sask.
Ora Mabyn Akers, Minneapolis, Minn.
Joseph Earnest McFee, Moose Jaw, Sask.
Joseph Henry Howard, Regina, Sask.

After the secret orders were concluded, a splendid banquet was given at the Wascana Hotel, pronounced by old Hoo-Hoo to be the finest banquet they ever atended. Each plate cost $3.75, and was a swell affair. A full band, orchestra and a vaudeville troupe gave a performance fittingly capping the climax to this decidedly western event.

SAWMILLING ON THE BAY OF QUINTE.

DESERONTO, Aug. 20, 1907.

Editor CANADA LUMBERMAN:

Dear Sir,—Many of the hundreds of thousands of tourists and others who have taken the "Thousand Island route" via the Bay of Quinte during the last forty or fifty years must have been greatly impressed with the evidences of Canada's chief industry as seen along the shores of the beautiful and picturesque Bay of Quinte. I refer, of course, to the lumber industry.

At Trenton, Belleville, Deseronto and other points large saw mills could be seen, and lumber piles lined the shores for miles, while thousands of logs floated on the surface of the water awaiting their turn to be sliced up into lumber. These were ideal points for this industry, a ready market being close at hand on both the Canadian and American sides, it being only a mater of forty or fifty miles across the lake to Rochester or Oswego, while Toronto on the west and Montreal on the east are about equi-distant.

Within the past few years, however, these evidences of this important industry have been gradually disappearing from this district, until now Deseronto is the only one of the above mentioned places which shows any evidence of being a lumber manufacturing town, the two saw mills of the Rathbun Company at this point being still engaged sawing pine, hemlock and hardwood lumber, their combined output being some twenty-five millions per annum, while the lumber piles line the shore for a couple of miles or so.

This firm market about half of their product in the American market, their steam barge "Reliance" and other vessels plying continually between this port and Oswego during the season of navigation, carrying lumber, shingles, etc.

Some of your readers may have noticed the comments of the press lately on what was supposed to be the last drive of logs which will ever come down the Moira river at Belleville. The drive in question came down a few weeks ago and was cut on the limits of the Rathbun Company, and I am informed that they expect to bring logs down that river for a number of years yet, and saw milling is likely to be the principal industry of this town for some time to come.

In the meantime outsiders are becoming alive to the advantages offered by Deseronto as a manufacturing site and other industries are springing up, one of the largest furniture factories in the Dominion having just been completed and ready for operation.

The late H. B. Rathbun, who founded this town some fifty years ago, must have had an eye for the picturesque, as no more beautiful site could be found on Lake Ontario, and I think I am safe in saying there is no better harbor on the lake, it is completely landlocked and a thousand vessels could lie at anchor without being crowded.

Along the shores of the several arms of the Bay of Quinte the scenery is beautiful, not the rocky, rugged scenery so familiar to Muskoka tourists, but of a more quiet and restful nature. Foresters' Island, the summer home of the late Dr. Oronhyetekha, lies opposite the town, and about ten miles further down the bay you come to Glenora—a beautiful summer resort. It is situated at the foot of a hill about two hundred feet high, crowned with verdure, nestling among which is that mysterious sheet of water known as the "Lake on the Mountain," a lake of clear water over a mile in length and half of that in width, and from which flows a never-ceasing stream aggregating thousands of galons per hour, and yet there is no diminution in the supply. The question is continually being asked, "From whence comes this water?" but no one as yet has been able to supply the answer, and it is as yet only a matter of conjecture; that it comes through a subterranean passage from a source on the mainland the same height as itself is the only thing certain.

A few miles further lies the stirring little town of Picton, the capital of Prince Edward County, which latter might share with the Niagara Peninsula the right to be called "the garden of Canada."

And so on down past historic Adolphustown you come to old Kingston, the "Limestone City" and the gateway to the 'Thousand Islands"

But I have already trespassed too much upon your space and wandered far from the subject I started to write about, so will leave the balance to a future letter.

Yours truly,

J. McG.

Toronto University Forestry Course

Although the complete course of study for the new Department of Forestry at Toronto University has not as yet been presented, the report of the Senate Committee on the Faculty of Forestry has been issued in pamphlet form and gives a fair idea of the work required for the new course.

The possibility that the new department may not attract a large enrollment for the first few years appears to have been taken into consideration by the Faculty and the course has been so constructed as to be as attractive as possible to intending students. Moreover, the possibility of objection being taken to the limited field popularly supposed to be awaiting graduates in Forestry, has been anticipated by the Faculty. It is pointed out as an indication of the widening field of private employment for such graduates that, out of a graduating class of 29 at the Yale Forestry School this year, only 15 are seeking employment in the Federal service, 10 are going into private employ, two have entered the Quebec Forest Service, one goes to the Orange River Colony, and one to the New York State Forest Commission. It therefore seems more than probably that governments, with timber lands to administer and lumbermen with limits to husband, will develop a demand for foresters as fast as our Department of Forestry can turn them out. It will be four or possibly three years before the first student in Toronto's Forestry course will be ready to accept positions, and during that time great advances will doubtless have been made towards formulating a rational policy for the preservation of Canadian forest wealth. The rapid vanishing of the country's timber resources is causing all who have their capital invested in timber to turn to science for assistance in preserving their holdings.

The matriculation requirements for admission to study in the new department are scarcely so stringent as is the ordinary matriculation and also considerable elasticity is allowable during the years of study. Candidates for a degree must pass the junior matriculation of the University in English, History, Mathematics, German and either French or Latin, with honors in English and Mathematics, unless (1) they possess a degree in Arts, not being an honorary degree, from any Canadian or British University of approved standing; or (2) have already matriculated in the Faculty of Arts or of Applied Science and Engineering; or (3) come from other institutions whose certificates are recognized by the University of Toronto as equivalent to the above entrance requirements, and will be accepted *pro tanto*.

The course as outlined is one of four years' duration, but provision is made to enable the student to obtain the preparatory training and the most essential branches of Forestry by the end of the third year. Upon the satisfactory completion of the three years of prescribed studies a "diploma of Forester" will be issued, entitling the holder to return at any time and complete his work for the degree of Bachelor of the Science of Forestry (B.Sc.F.). The arrangements to allow of transfers being made from other departments to the Faculty of Forestry are restricted to the first two years.

A feature of the new scheme which ought, during the first few years at least, to be of considerable importance in swelling the ranks of Forestry graduates, is that which extends special privileges to those students of the School of Practical Science who have obtained the diploma of the Faculty of Applied Science and Engineering at the completion of their three year's course. These are to have the option for their fourth or post-graduate year of specializing in Forestry. If they take that option they will be eligible both for the diploma of Forestry and the degree of Bachelor of Applied Science. This is a source of encouragement to the student in Forestry as well as a means of protection. If it should by any possibility happen that interest failed to create itself in this new department of the University's work among Canadian timbermen, the student who is a Bachelor of Applied Science as well as a Bachelor of Forestry can turn to some branch of science other than Forestry. Another regulation of importance is that whereby students not under 21 years of age, and giving satisfactory evidence of ability to carry on their studies properly, may be admitted without examination as special students.

The first two years of the Forestry course are to be devoted mainly to the study of fundamental subjects, including Mathematics, Phyhics, Chemistry, Biology, German, French and Forestry, under the compartments of Geology, Surveying, Map-drawing and Forest Geography, these latter receiving especial attention in the second year. In the third years the Forestry course proper is entered upon, and consists, in addition to advanced work in the subjects already mentioned, Forestry Mensuration, Silviculture, Forest Utilization and Forest Protection. The fourth, or post-graduate year, is somewhat more general in scope than any of the preceding three and includes Political Economy, Constitutional History, Valuation and Finance, History of Forestry, Administration, Seminary work in German, Silvicultural Literature, Timber Physics and Wood Technology.

The summer work of the first year is to consist of Botany and that of the second of employment on Forest Survey and Field Zoology. Short excursions for third and fourth year students will be arranged from time to time, Saturday being the day usually chosen. In these outings students are to inspect wood lands, logging operations, mills and woodworking establishments. Engagements will be made for the spending in lumber camps of a week or ten days of the Christmas vacation by the third and fourth year men. Eventually it is hoped the use of a forest reserve may be obtained from the Government for practical work. In the event of this hope materializing, students and instructors will be required to spend six weeks upon the reserve after the close of the academic work.

As yet the science of forestry has few devotees in America, but, as the University Senate in its report points out, "the existence of a specially educated class creates a demand for their employment." In the United States the first professional Forestry School was established in 1898, and since that time apparently not the slightest difficulty has been experienced in placing graduates, until today, with half a dozen schools or more, the demand for graduates is not equalled by the supply.

In Canada until recently only a very limited number of Government positions were open to eduated foresters. Lately, however, three lumber companies have seen the wisdom of employing educated men on their staffs, and the example would probably be followed by others if proper men were available. The absence of such must also to some extent explain the slow progress in employing forestry principles in the handling of the timber limits and forest reservations by the Government of Canada. That sooner or later the Government must come to a systematic forest management under technically educated men admits of no doubt, and the existence of men educated at public expense would appear an earnest of the Government's desire to inaugurate such management as soon as practicable.

A REMEDY FOR DRY ROT.

A good remedy for dry rot is petroleum. The affected parts of the wood are painted with it, which causes the fungi to die, turn black and finally drop off. The best preventive of dry rot is plenty of draught. Another remedy is ordinary salt; it absorbs the moisture of the wood, whereby it is itself dissolved, thus gradually infusing the entire plank.

MAKING PAPER IN A HURRY.

The directors of a great German paper factory have made a remarkable record in cooperation with a newspaper. At 7.35 a.m., three trees were cut down close to the factory, trimmed and carried to the pulp mills. They were at once transformed into paper, the first roll being ready at 9.34 a.m. The pressroom of the newspaper was two miles away and the paper was rushed there in an automobile and immediately fed to the press. At ten o'clock sharp, the first copies were sold, having been printed on paper which two hours and twenty-five minutes before had been waving in the morning breezes.

ACCIDENTS IN LUMBER PLANTS.

Certain accidents are incident to every class of labor, and while the manufacture of steel and its allied industries are responsible for a large number of accidents, in relation to the number of men employed, many of them very severe and often involving a large number of employes in one accident, yet the lumber business is responsible for a large proportion of the accidents that result in damage suits, and, therefore, a review of some causes that lead up to claims may be of service.

The industry may be divided into sub-divisions, representing the process from the growing lumber to its disappearance commercially:

1. Logging, with pile driving or logging railroad, according to location.
2. Saw mill, shingle mill and planing mill.
3. Lumber yard.
4. Railroad hazard, incidental to 2 and 3.

Owing to the rapid exhaustion of all standing lumber of decent size within a reasonable distance, the cutting of logs has been going further afield, and we find the principal business carried on now in Wisconsin, Minnesota, Washington, and, in the south, in Texas, etc. In New Hampshire the forests are being stripped of the smallest trees and rapidly turned into sawed lumber by aid of the traveling saw mill.

Reverting to the logging, we have a class of risk in which, if an accident happens, the injuries are likely to be serious, the chances of proper surgical relief remote, the expense and difficulty of investigation great, with the evidence against the employer on the side of the injured. For these reasons, apart from the question of liability, the charge for indemnity is necessarily high. Further, it is impossible to make any suggestions, by inspection or from experience, for improving the hazard, as the conditions vary.

When we come to the consideration of the railroad hazard we meet a danger that constitutes a heavy expense on the employer on account of the conflicting decisions in the States on the question of whether the law governing railroads as common carriers applies to companies carrying lumber as incident to their business.

In the case of McKivergan vs. Alexander & Edgar Lumber Company, the Court of Appeals in Wisconsin concurred in the opinion of the lower court that the provision "Every railroad company, operating any railroad which is in whole or in part, within this State, shall be liable for all damages sustained within the same by any of its employes without contributory negligence on his part," did not apply to private roads, such as the logging road on which the accident occurred.

In Texas, however, in the case of Lodweck Lumber Company vs. Taylor, which arose under the Texas statute, abolishing the common law rule as to fellow servants on railroads and street railways, the Court of Appeals held that "railroad" did apply to the lumber company owning and operating, purely in connection with its business, a few miles of roads and some logging and lumber cars.

The question of properly guarding machinery enters very largely into the hazard of the saw mill risk. The employment of children under age where dangerous machinery is running is mentioned by the Supreme Court of Washington in the case of Kirkham vs. Wheeler, Osgood & Company. The court said, in part: "The employment as well as the hiring out is illegal. An employer who knowingly employes, or keeps in his employ, a minor within the prohibition age is guilty of a violation of the statute."

The same court in the case of Hall vs. West & Slade Mill Company laid down the rule that, where the plaintiff had been injured while in the employment of the company by reason of the unguarded condition of a set screw on the shaft, the company could not plead the defence of assumption of risk.

In the State of Michigan, where the saw mill risk is very large, the Supreme Court on appeal, in the case of Sterling vs. Union Carbide Company, ruled that "where a statute requires an act to be done or abstained from by one person for the benefit of another, an action lies in favor of the latter for a failure to observe the requirements of the statute."

Not only is it necessary to guard the saw where the danger is apparent, but even below the table a guard is necessary. The accumulation of sawdust thereunder will, in the course of time, hide the saw. An employe, removing the accumulations that choked the free action of a saw, was injured by kicking away the sawdust, and he recovered for the loss of his foot on the ground that the saw was hidden and should have been guarded.

The State of Illinois in the case of Edward Hines Lumber Company vs. Ligas held that a master cannot delegate to another his duty to exercise reasonable care in furnishing safe machinery, etc., while the State of Washington declared the principle that a sawyer and a millwright are not fellow-servants, although both may be in the same employ.

It is certain that in lumber risks, the injuries, from the nature of the work, are serious generally, and under no circumstances should children be employed. The protection of the employes, not only operating, but working around the saws, should be as complete as engineering skill can make it, and the employer, in addition to providing guards to the saws and planers, wherever possible, should insist upon such guards being maintained constantly in position.

There are many effective saw guards, and guards to other machines are frequently planned and fixed in position by local talent. On no account should a guard, once attached, be removed on some imaginary or possible ground that it hampers the rapid turning out of work. No such plea is accepted after an accident.

It cannot be urged too strongly that no employe should be allowed to operate a machine known to be defective, as "contributory negligence," or "assumption of risk," is a very slender defence where an employe can exhibit in court a maimed hand or an empty coat-sleeve. The dangers of the business, even with care, are real enough to make the risk extremely hazardous.

TO RECLAIM SUNKEN LOGS.

Logging operations in Minnesota have now advanced to the point where not only the dead and down timber is utilized to the utmost, but steps are now being taken for the reclamation of the "deadheads" or sunken logs at the bottom of the Mississippi River. Fabulous wealth, represented by the untold number of logs that have been accumulating along the river for decades, awaits the men who reclaim it from the depths.

It is believed that the river bottom is literally paved with logs from St. Anthony Falls almost to its source. For the last forty years from 500,000,000 to 600,000,000 feet of logs have been floated down the river, and the number that have gone to the bottom of the river is beyond estimating. For more than 250 miles the bottom of the river is lined with logs.

It has been demonstrated that logs may be raised with great profit. Wallace A. Burt and others have been contemplating for some time the advisability of hoisting these logs, and with that object in view have laid their plans before a number of the leading lumbermen. The plan is to raise the logs by hoisting engines and land them ashore, where a government official will scale and record the marks found on them. When the original owner can be found he will be compensated for the logs at the rate of $8 a thousand feet. This represents just so much "velvet" to the owners and still leaves a margin of profit to the hoisters, who can find ready market for the reclaimed logs at from $12 to $14 a thousand feet.

The logs that became deadheads or "sinkers" are chiefly of the small Norway pine variety, known to lumbermen as "pig iron" Norway. They seldom get to be more than eight to twelve inches through at the butt and are heavy and soggy. Rivermen say that a great many of these sink before leaving the landing, a few of them deadhead it down stream for a way, one end bobbing above water until, thoroughly water soaked, they sink to rise no more. Some of these bobbers succeed in reaching the mills, but a large percentage of them go to the bottom.—Mississippi Valley Lumberman.

A tendency toward longer railroad ties to provide for heavy rolling stock was shown by the discussions at the recent convention of the Roadmasters and Maintenance of Way Association, at which the 9-foot tie was unanimously voted to be the best length for modern conditions. Ties 8 1-2 and 9 feet in length have been used to a considerable extent of late by a number of trunk roads, with especially good results, and the 9-foot length has been in use on the Houston & Texas Central Railway for a number of years.

THE NEWS

ONTARIO.

The Gordon Pulp & Paper Company are making progress with their pulp mill at Dryden, Ont.

Mr. J. T. Schell is installing a 100 light generator and 8 horse-power motor in his mill at Alexandria, Ont.

The Dominion Lumber Company, Limited, have removed their head office from the city of Quebec to Deseronto, Ont.

The planing mill of George Wood & Son at Dundalk, Ont., was destroyed by fire about two weeks ago, the loss being $6,000.

The name of the Elmira Interior Hardwood Company, Limited, has been changed to the Elmira Interior Woodwork Company.

The new regulations of the Ontario Government requiring lumber companies to report to the Provincial Board of Health as to the medical attendance they have provided at their camps is now in force.

Among the companies incorporated last month was the Beaty Timber Company, Limited, of Toronto, with a capital of $100,000. The provisional directors are Malcolmn Macnair, J. P. Beaty and C. B. Beaty.

The Kells Lumber Company, Limited, of Kells, Ont., has been incorporated, capital $6,000. The provisional directors are Henry Anderson, John Parkin, John Anderson, A. T. Anderson and Thomas Anderson.

Incorporation was granted last month to the James L. Burton & Sons Lumber Company, of Barrie, Ont., with a capital of $250,000. The company will acquire the business now carried on by Mr. J. L. Burton.

The estate of the late Mr. John Waldie, president of the Victoria Harbor Lumber Company, Toronto, is valued at $457,534.85, which is to be divided between his widow, sons, daughters and eleven grandchildren.

An Ontario charter was last month granted to the James Bay Lumber Company, Limited, of Toronto, with a capital of $40,000. The directors include Messrs. T. R. Parker, manufacturer, and A. M. Miller, lumberman.

Fire at Blind River, Ont., damaged the plants of the Dominion Lumber Company, Moore & Macdonald, Moulthrop Lumber Company, Hope Lumber Company, and Morgan Lumber Company, together with a quantity of lumber.

The Rainy Lake & River Boom Company, incorporated under the laws of the State of Minnesota, have been granted a license to do business in Ontario. Mr. Donald Robertson, of Rainy River, Ont., is their attorney.

The Spruce Lumber Company, Limited, is the name of the new company incorporated last month. The capital stock is placed at $45,000, and the head office is at Ottawa. The incorporators include D. B. McDonell, lumber agent, of Winnipeg, and Charles McDonell, lumberman, of Ottawa.

The Benson Lumber Truck Company, Limited, has recently been formed, to manufacture lumber wagons, trucks, etc., and in particular the Benson patent lumber cart. The capital stock is $20,000, and the promoters include A. W. Benson, of Minneapolis, and George S. Clark, lumber merchant, of Port Arthur.

Mr. A. G. Chew is now operating the mill at Waubaushene formerly owned by Tanner Bros. It has been considerably altered, double band saws having been substituted for the original single bands, considerably increasing the cut and the number employed. Railway sidings have also been run into the yard and extra tram built.

A company, to be known as "The Ottawa Pulp & Paper Company," has recently been formed at Ottawa for the purpose of manufacturing pulp from spruce and hemlock refuse. Hitherto no use has been made of this refuse, which the company now intend to ship to Messena, N.Y., where it will be manufactured into paper. The growing demand for wood pulp across the border makes a venture of this kind of considerable importance.

THE EASTERN PROVINCES.

A saw mill owned by E. Pattenaude, of St. Margarets, Northumberland County, N.B., was burned last month.

Fire recently destroyed the sash and door factory of V. E. Traversy, Montreal, the loss being estimated at $15,000.

Thomas Morin and L. Lebel have registered partnership in Montreal as manufacturers of sash and doors, under the name of Morin & Lebel.

The property of J. & D. A. Harquail at Campbellton, N. B., is on the market. It consists of planing mill, sash and door factory and lumber yards.

The Miramichi Lumber Company are reported to be negotiating for the purchase of the Clarke spool wood mill at Newcastle, the intention being to convert the establishment into a shingle mill.

The Dalhousie Lumber Company, of Dalhousie, N.B., are offering for sale their timber limits, mill, and booming privileges, situated in the county of Restigouche. The limits comprise 554 1-2 square miles.

The Haskell Lumber Company, of Fassett, Que., expect to install a Waterous double cutting band mill, making two bands and one band re-saw. They have also on order a 65 ton Lima locomotive and 20 more logging cars.

Vanderbeck & Company, an American firm, have recently completed the erection of a saw mill at Millerton, N.B. Lath and shingles will also be manufactured. This makes two mills at this point, the other one being owned by the Renous Lumber Company.

The Argenteuil Lumber Company, Limited, has recently been incorporated, with a capital of $90,000, and headquarters at Morin Flats, Que. The incorporators include G. H. Perley, lumber merchant, of Montreal, and J. P. Middleton, mill foreman, of Morin Flats.

The ratepayers of Dalhousie, N.B., recently voted in favor of accepting a proposal made to the town by the Cascapedia Trading Company to establish mills for the manufacture of lumber, shingles and pulpwood. It is said the expenditure will be nearly $1,000,000. The company own large timber limits in Bonaventure county.

WESTERN CANADA.

Mr. W. F. Ramsay, lumber dealer, Killarney, Man., has been succeeded by Nelson & Thomas.

The assignment took place last month of James & Otterbine, lumber dealers, Didsbury, Alta.

The Fraser River Sawmills, New Westminster, are building a logging railroad at Courtney, B.C.

J. A. Sayward & Company, of Victoria, B.C., are building a mile of logging railroad at Powell Lake, Vancouver Island.

It is understood that Messrs. Stacey & Garland, of Vancouver, B.C., owners of the Edmonton Logging Company, purpose building a logging railway.

The Westholme Lumber Company, Limited, of Westholme, Vancouver Island, has rented the Lennox & Mount Sicker Railway line and will use it for logging purposes.

A Dominion charter has been granted to the Beaver Elevator Company, Limited, of Winnipeg, with a capital of $99,000, to carry on a general elevator and lumber business.

The business of the Manitoba Lumber Company at Eburne, B.C., has been taken over by Mr. P. D. Roe, who was formerly interested in the Canadian Pacific Lumber Company at Port Moody.

Mr. W. Finch Page, of Victoria, and associates, have purchased the plant and interests of the British Columbia Manufacturing Company, Limited. The concern will hereafter be known as the British Columbia Veneer Manufacturing Company, Limited. The

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outpnt of this company is chiefly fruit boxes, crates, etc., and wood veneer of all kinds. The change was made about the first of July last. Mr. Walter Ellis is now the manager of the new concern.

The Red Cliff Lumber Company, of Duluth, are reported to have completed the purchase of 30,000 acres of timber lands on the west coast of British Columbia with the intention of erecting a large mill in the vicinity of Alberni.

A scow belonging to Captain French, of Vancouver, loaded with a donkey engine and other logging camp equipment, upset recently in the Gulf of Georgia while being towed by the steamer St. Clair. The cargo was the property of the Patterson Lumber Company.

Work on the mill for the new North Arm Lumber Company at Eburne, B.C., has commenced. At the time of writing there is a gang of men at work clearing land in preparation for the mill. Mr. R. H. McKee, of Vancouver, is president of this new company.

Messrs. Mitchell & Ferris, of Vancouver, are remodelling the saw mill plant of the B. F. Graham Lumber Company, at Victoria, B.C. The improvements consist of the installation of live rolls, slashers, trimmers and transfers, a 125 foot sorting table, complete chain conveyor system and lath mill outfit. The planing mill has been augmented by a Berlin resaw. The capacity of the mill up to the present date has been increased 30 per cent. When all the machinery has been installed the plant will have a daily capacity of 50,000 feet.

Messrs. T. F. and W. J. Paterson, of the Paterson Timber Company, and T. T. Gadd have purchased a half interest in the old Cook & Tait Lumber Company at Vancouver, B.C., Mr. Tait dropping out of the business. The name has been changed to the Terminal Lumber Company, Limited, capitalized at $100,000. W. B. Cook assumes the position of business manager and T. T. Gadd the position of superintendent of the mill. The company are making several additions to the plant, including a new 72 inch by 16 feet boiler, and a new brick burner. The plant has a daily capacity of 100,000 feet of lumber and 200,000 shingles when running under two shifts.

The Burley Lumber Company, Limited, is the name of a lumber manufacturing concern at New Westminster which was organized in January last. This company's plant is located right in the timber limits, about five miles from the City of New Westminster. The equipment consists of a circular top and bottom slashing down saw, a four-saw Hamilton edger, two cut-off saws, and one Cowan sticker. The power plant comprises a 125 horse-power boiler and a 100 horse-power Fairbanks-Morse engine. The daily capacity of the plant is about 25,000 feet, consisting chiefly of fir.

Mr. Hugh McDonald and associates, of New Westminster, B.C., are about to erect a shingle mill at that point. A twenty-five acre site has been secured on Lulu Island, just across from the city, with 1,000 feet of water frontage on the Fraser river. A start will be made on the erection of the buildings early this month, and it is expected that the mill will be in operation by January 1st next. The equipment at the beginning will consist of five shingle machines of Johnson-Schaake type, a 72 inch by 19 foot boiler, manufactured by the Vulcan Iron Works, of New Westminster, and a pair of 250 horse-power twin engines. All the running equipment will be supplied by the Schaake Machine Works of New Westminster. Mr. McDonald has had considerable experience in the lumber industry, having been superintendent for the Brunette Sawmills during the past ten years. It is expected that during the next year a large saw mill will be added to the company's plant.

TRADE NOTES.

R. G. McMichael, D. J. Angus and others, of Montreal, have been incorporated as the Imperial Rubber Company, Limited, the capital stock being placed at $20,000.

The Canadian Logging Tool Company, incorporated under Dominion laws, has been granted a license to do business in Ontario, Mr. John H. Bennett, of Sault Ste. Marie, being named as attorney.

The A. J. Burton Saw Company, of Vancouver, report an abundance of orders on hand at the present time. They state their business is exceptionally good for this season of the year, and they are employing more men than ever.

The Best Steel Casting Company, Limited, of Verdun, Que., has been incorporated by the Dominion Government, with a capital stock of $299,000. The incorporators include O. L. Henault, Westmount, L. H. Henault and T. J. Best, of Montreal, and A. Nadeau, of Verdun.

A company known as the Vulcan Iron Works, Limited, of New Westminster, has been formed to take over the plant and interests of the Vulcan Boiler Works at that place. The new company, which consists for the most part of the former proprietors, expect to assume charge immediately. They will continue to manufacture boilers and general plate work, and, as business warrants it, will enlarge their buildings and equipment. Mr. D. L. Patterson, of New Westminster, is the leading spirit in this new enterprise.

The thirty-third annual number of Lockwood's Directors of the Paper, Stationery and Allied Trades is now in the hands of the printers, and will be issued about the second week in September. This will bring it out fresh and up-to-date at the beginning of the fall season.

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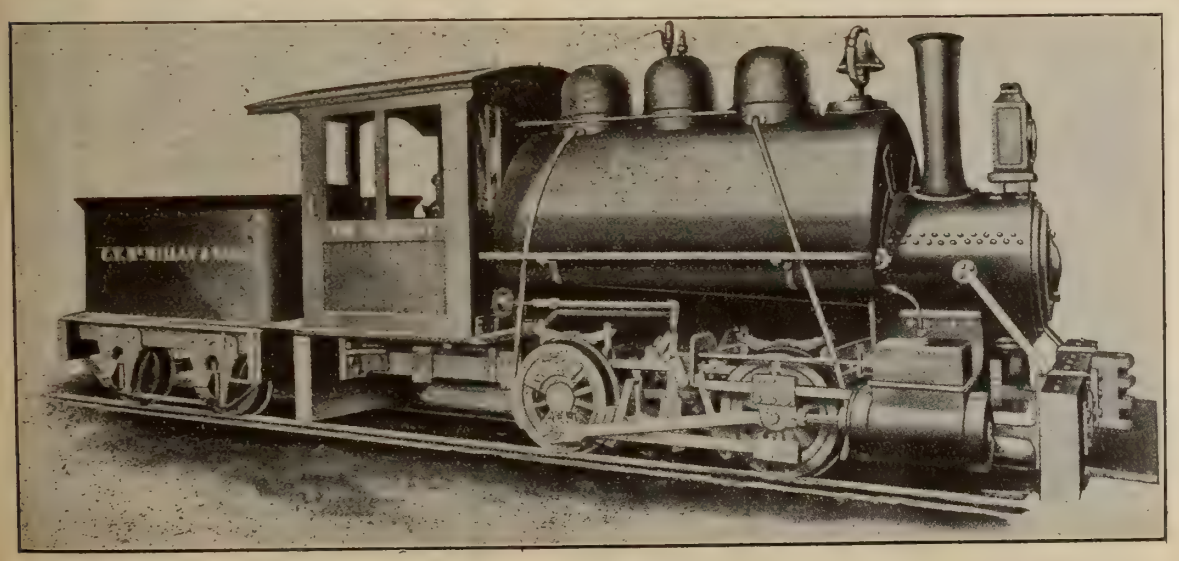

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ELECTRICITY IN BOX FACTORIES.

In the equipment of box factories to-day electricity for power transmission is very conspicuous, especially among the larger plants. Electric transmission for driving wood working machinery, says the St. Louis Lumberman, is not a new thing by any means, neither is it new to the box factories, but it has never heretofore attained such prominence nor received as wide attention from those building new plants or rebuilding old ones. Probably had the electrical machinery people done more advertising, electric transmission would have atttained this prominence earlier, and the cause may be furthered considerably even now by the same treatment. As it stands it's an open question whether the electrical machinery people have been doing a lot of quiet work themselves, or whether the box men have voluntarily sought light on the subject and taken up with electric transmission of their own accord. But, no matter how it came about, there is no getting around the fact that as a rule to-day when a man goes to equip a new box factory of any magnitude electric transmission plays an important part in the equipment. Just what it offers in the way of power economy probably depends materially on the size of the plant, and local conditions generally. However, where it offers simply an even measure in power economy there are other advantages that make it popular. In the first place it saves room and permits of wider latitude in the distribution of the machines for convenience in systematizing the work. In the old style of driving it was necessary to keep in mind the location of shafting and the distribution of power therefrom, and this frequently interfered with placing the machines in the most desirable manner for carrying on the work. With electric transmission no thought need be given to anything but locating the machines so as to get the best results and the most complete system of manipulation of stock through the plant. Also, in dispensing with heavy line shafting and heavy belt drives it not only saves power, wear and tear, but also eliminates quite a lot of the element of danger attached to the work. Belts and pulleys are the main sources of danger in any factory, and with the majority of these gotten out of the way there is enough saving grace in the added safety alone to make electric transmission worth while, even though it should cost more to install than the old shaft and belt transmission. The usual plan followed is to drive all heavy machines, using 5 horse-power and up with motors attached to light line shafting overhead. Working along this plan there is no need to have anywhere in the factory a piece of shafting larger than 1 15-16, and many may be even lighter than this. There is no call for large pulleys, or for heavy belts, there is not as much noise, and there is more light and room. In fact, there are so many things that can be said in favor of electric transmission, that the only wonder is that we have not had more of it before. Of course, the logic doesn't apply as well in small plants as in the larger ones, nor in one storey factories as well as those of two, three and four storeys, and it is not meant to argue that any man with any little box factory should pull out his line shafting and put in electric transmission, for there are undoubtedly many such small plants where it would not be an advisable move. However, when it comes to the equipment of a plant of any magnitude no man should start into it without first looking up the possibilities of electric transmission, and when he looks that up thoroughly he generally finds so many things in its favor that he won't be satisfied with anything else.

ABOUT GRAPHITE LUBRICATION.

Although the excellence of graphite for all sorts of lubrication and its particular adaptability to certain difficult lubrication is a matter with which most of us are familiar, few, perhaps, are cognizant of the fact that there are two forms of graphite—flake, or foliated, and amorphous, or non-structural, graphite —and that though chemically the same the latter is capable of finer pulverization and with careful treatment may be reduced to an impalpably fine powder absolutely free from grit or any sort of harmful impurity. Flake graphite, on the other hand, no matter how finely pulverized, always retains its original mica-like or crystalline structure, and, comparing one with the other, there is a vast difference in nature, texture, action and effect.

In the first place amorphous graphite is adhesive in the highest degree. It stays put, and adhesiveness is one of the first requisites of an efficient lubricant in that to cool a hot bearing it is absolutely essential that the lubricating agent "stay put" where applied. To illustrate: Take a pinch of finely pulverized amorphous graphite and rub same in the palm of the hand, on paper or on some other convenient surface and observe its action.

Note that the more one rubs the more effective the lubrication, for this form of graphite is not easily removed from surfaces in frictional contact but maintains constant and effective duty right at the point of contact and is at its best under heavy frictional pressure in that as above stated it is adhesive in the highest degree—"stays put"—and there is absolutely no waste, as every particle is an active lubricating factor.

Then, too, as an impalpable powder it readily and quickly penetrates and distributes itself in a smooth, slippery, even coating between the tightest bearings, filling every pore, crevice and interstice, thereby evening irregular bearing surfaces and reducing friction to a minimum.

Let us also see how, mixed with lubricating oils, this amorphous graphite will minimize friction.

A microscopic examination of perfectly smooth bearings—cylinder surfaces for instance—will disclose many minute irregularities, which, in the nature of things, must be productive of more or less friction. This friction of course means wasted energy—energy that instead of being utilized as power is absorbed as heat—a condition that more often than not means an overheated bearing with the consequent loss of time and temper. To effectively overcome this friction and utilize this otherwise wasted power, a lubricant possessing considerable "body" is required—that is a substantial lubricate of such a nature as to eliminate as far as possible these microscopical irregularities and provide a bearing offering minimum resistance to the surfaces in play.

Experience, which is man's teacher, has not only demonstrated time and again that oil in itself will accomplish this only to a certain extent, but it has also taught that pure soft finely powdered graphite, properly and judiciously applied, will do wonders, so it only remains to make the proper application of the right sort of graphite. It has, therefore, long been the endeavor of intelligent engineers to secure a graphited oil, that is to say, an oil in which graphite floats or is held in suspension without precipitation sufficiently long to perform its duty, for it is easy to see the great advantage to be derived from the use of an oil having every drop impregnated with solid lubricating matter.

This seemingly simple problem, however, is one that has until lately baffled engineers of experience, but it has now been found that amorphous graphite when reduced to an impalpably fine powder will, when mixed with oil in the proportion of about one teaspoonful to the pint of oil, remain in perfect suspension long enough to feed through lubricator tubes without clogging, thus causing every drop of oil to carry its mite of graphite.

The United States Graphite Company, Saginaw, Michigan, prepares a lubricating graphite of this description.

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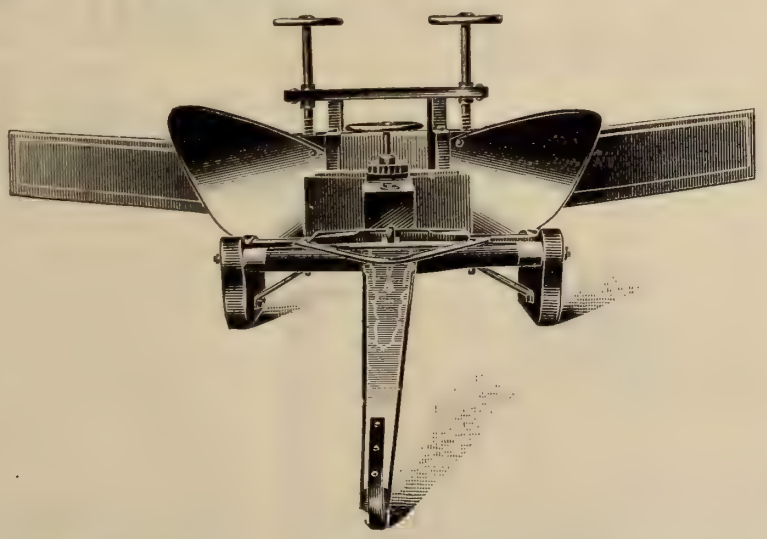

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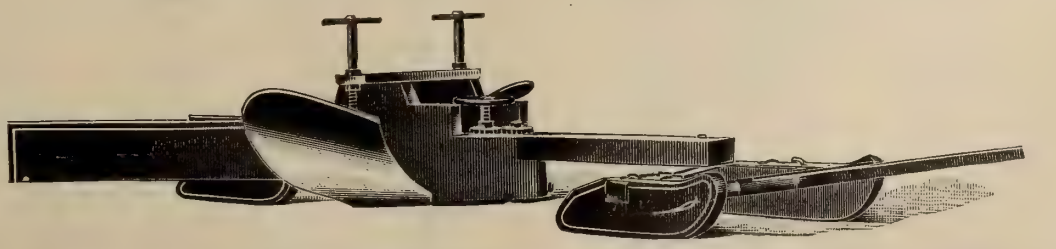

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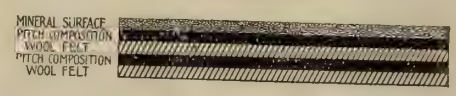

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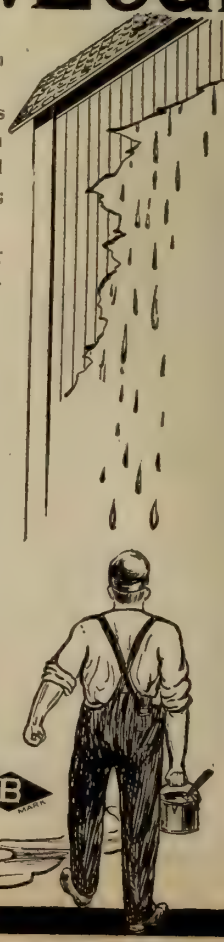

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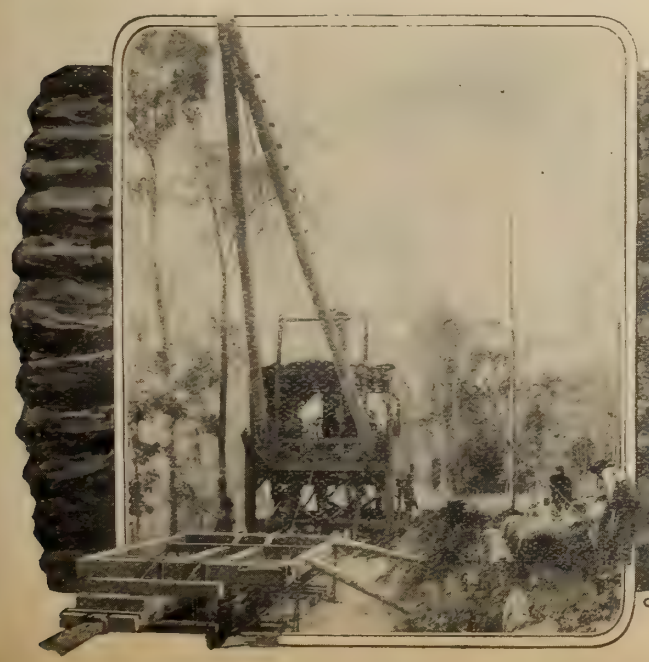

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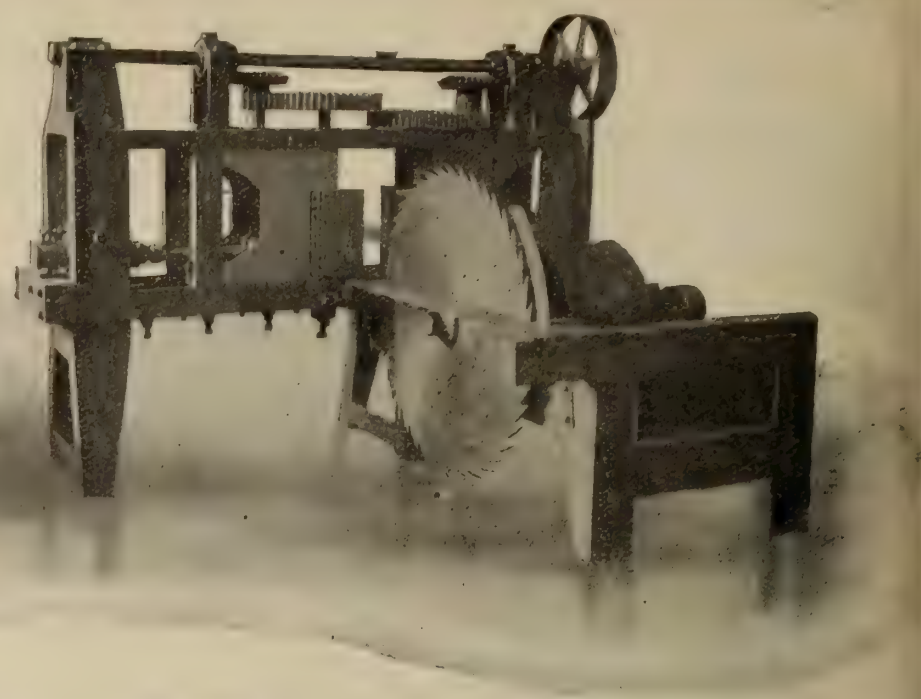

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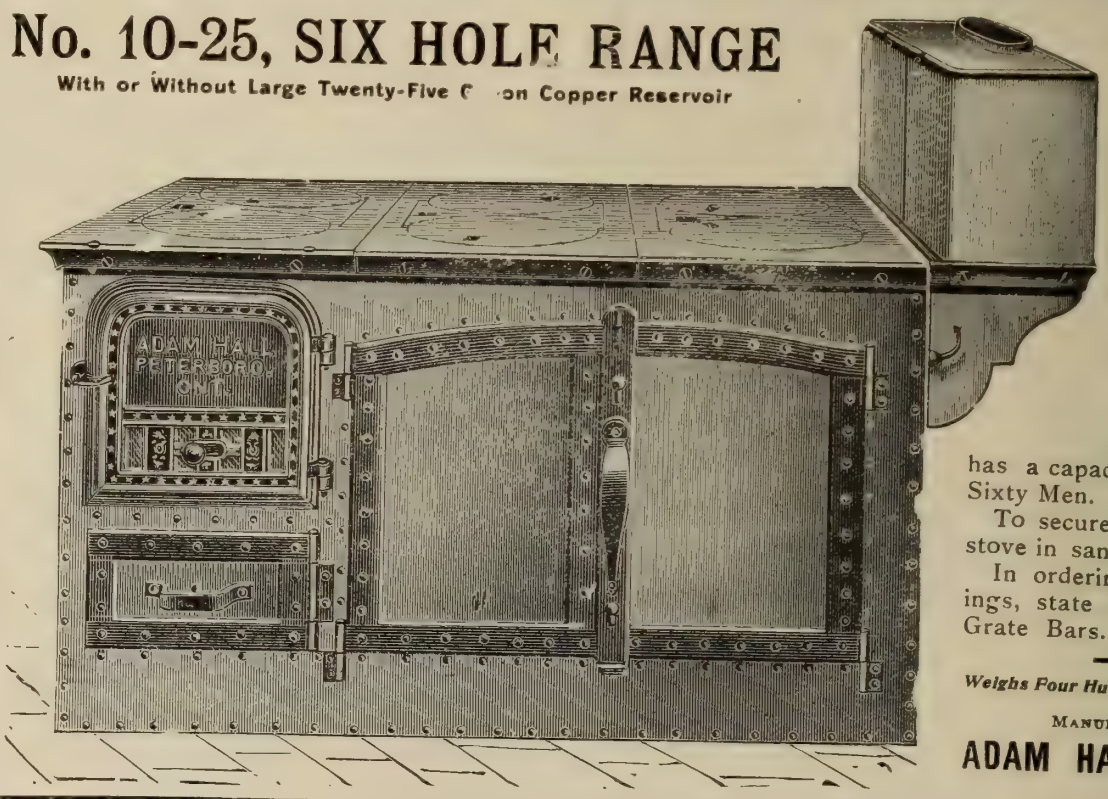

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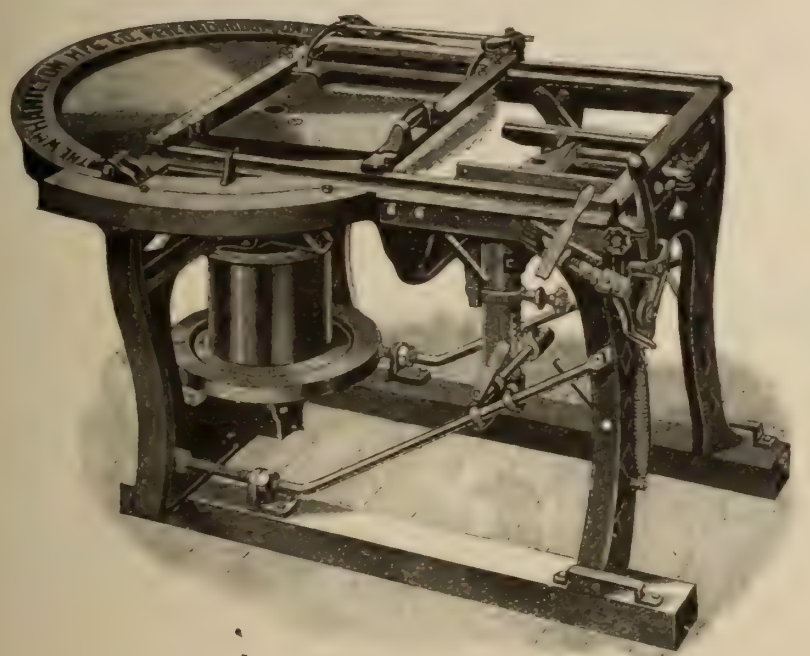

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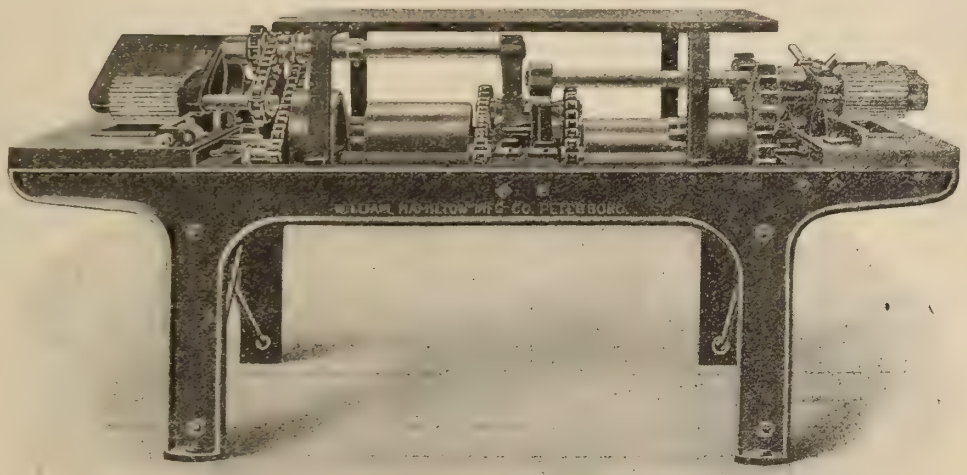

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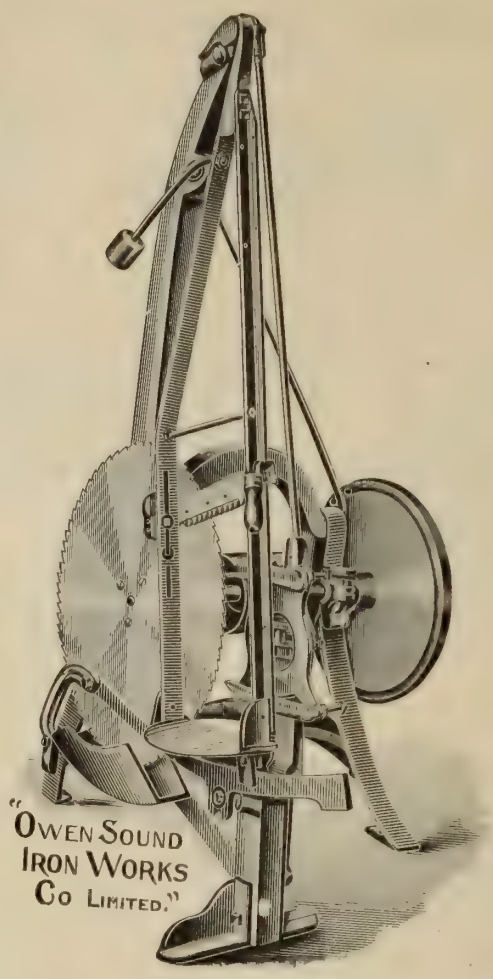

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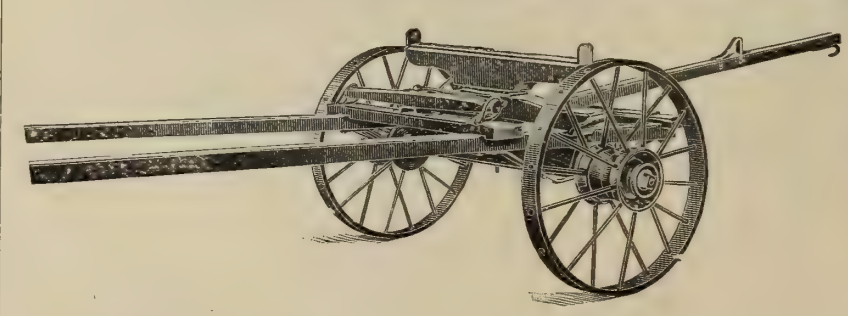

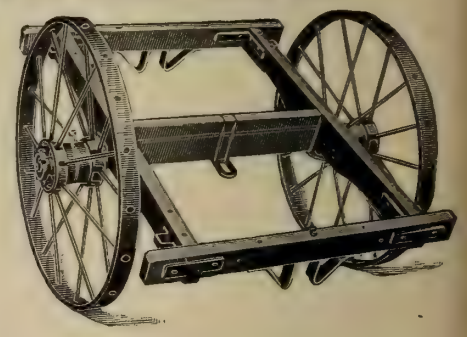

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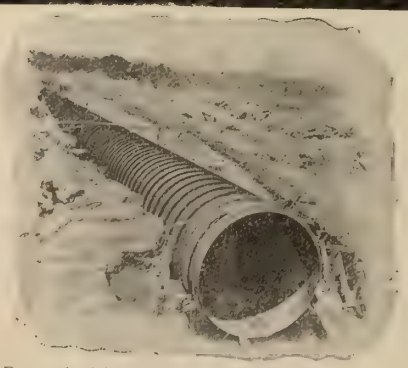

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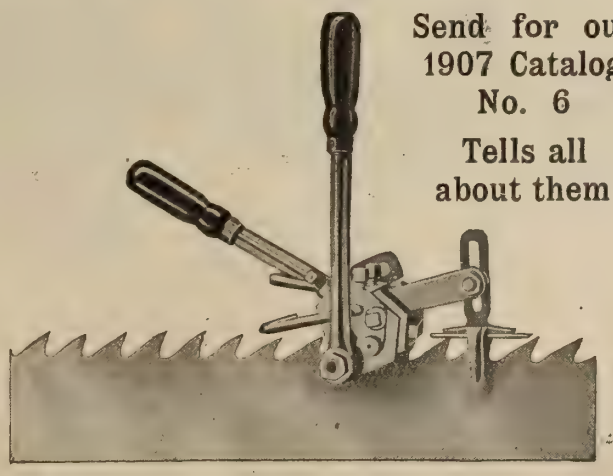

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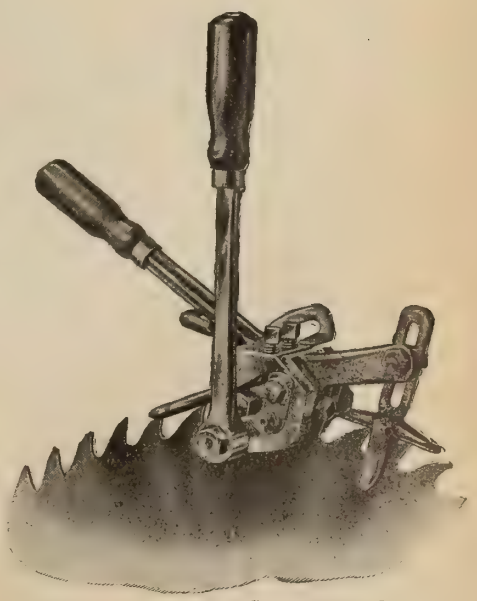

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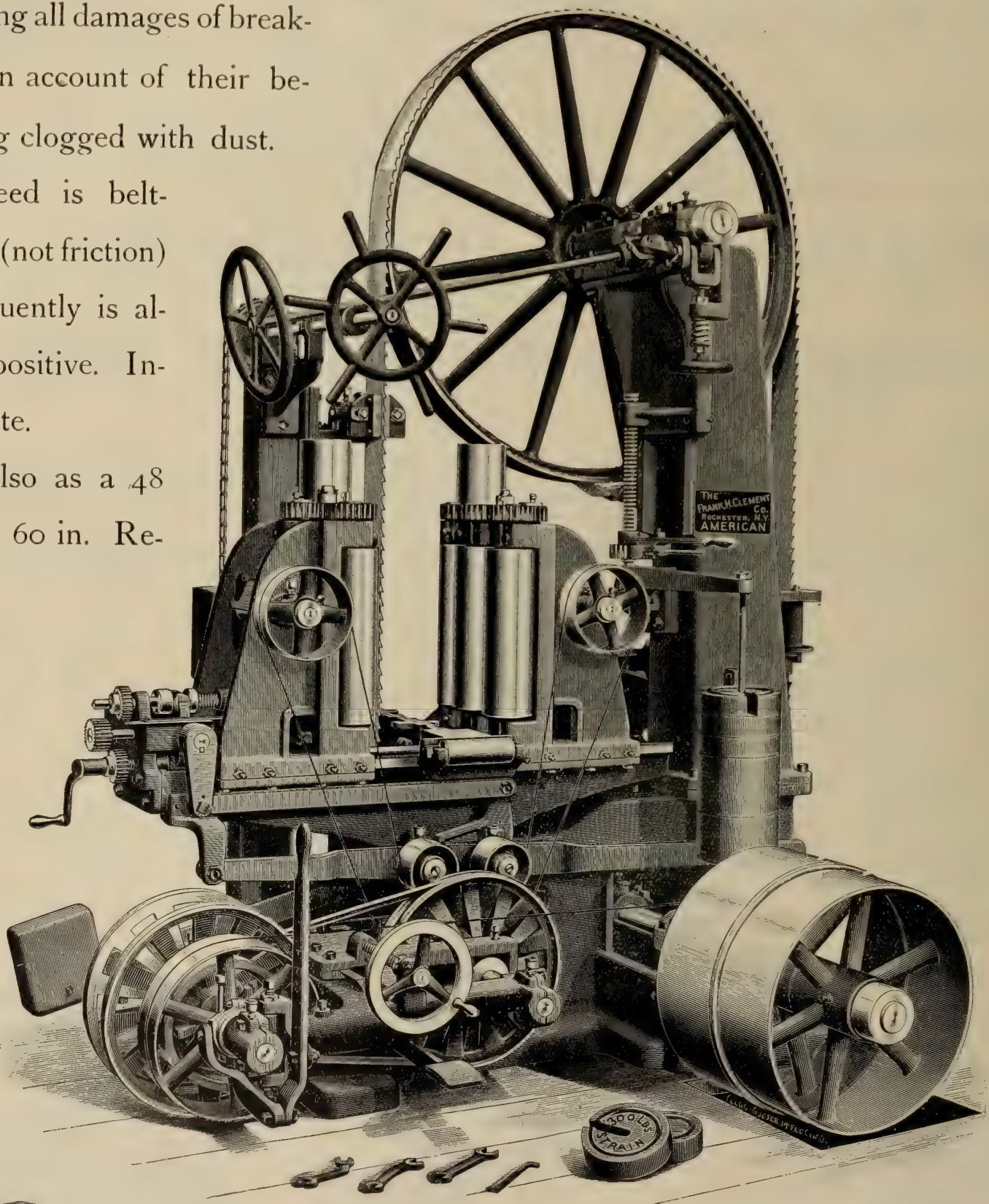

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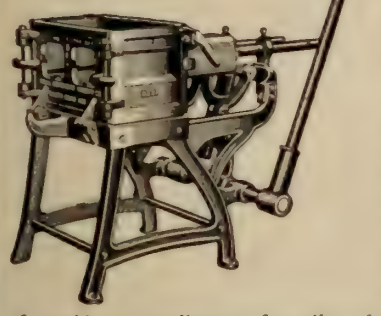

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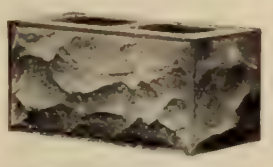

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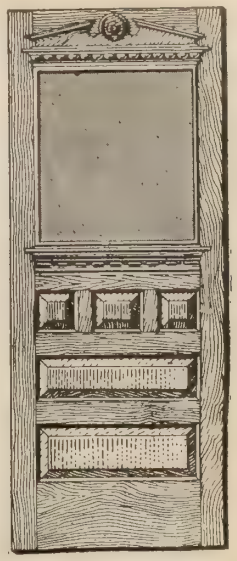

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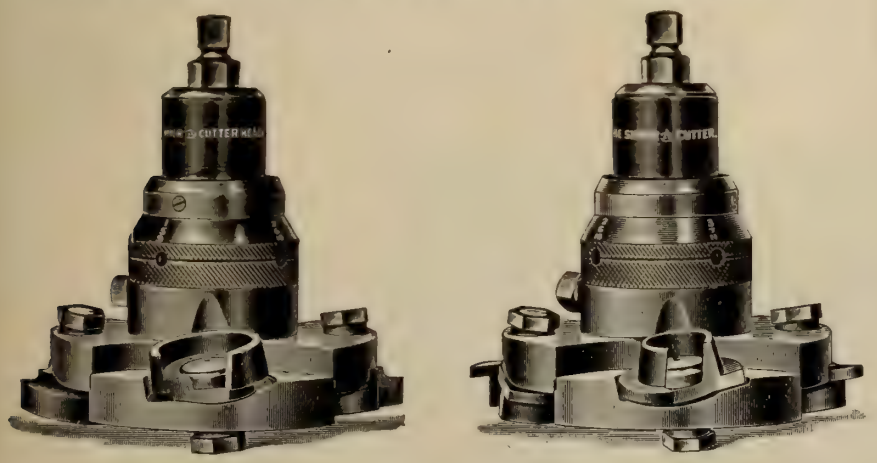

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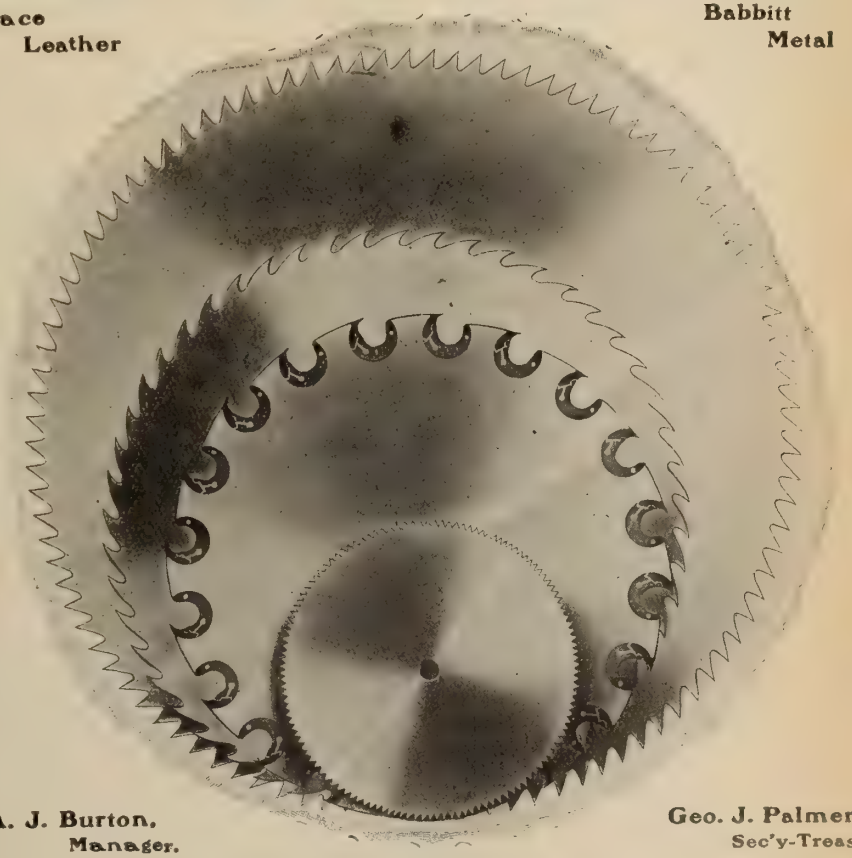

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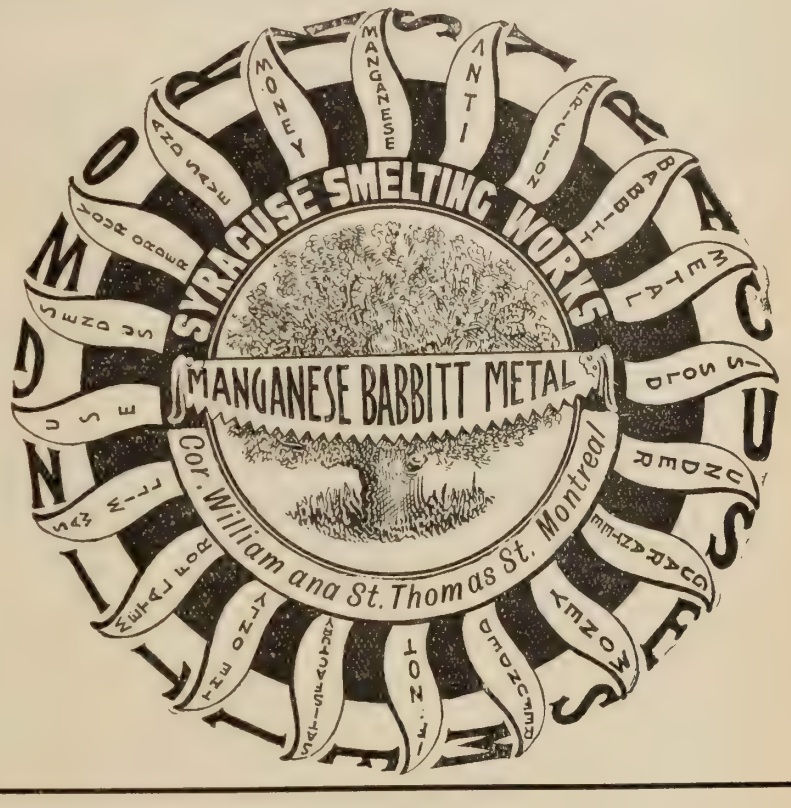

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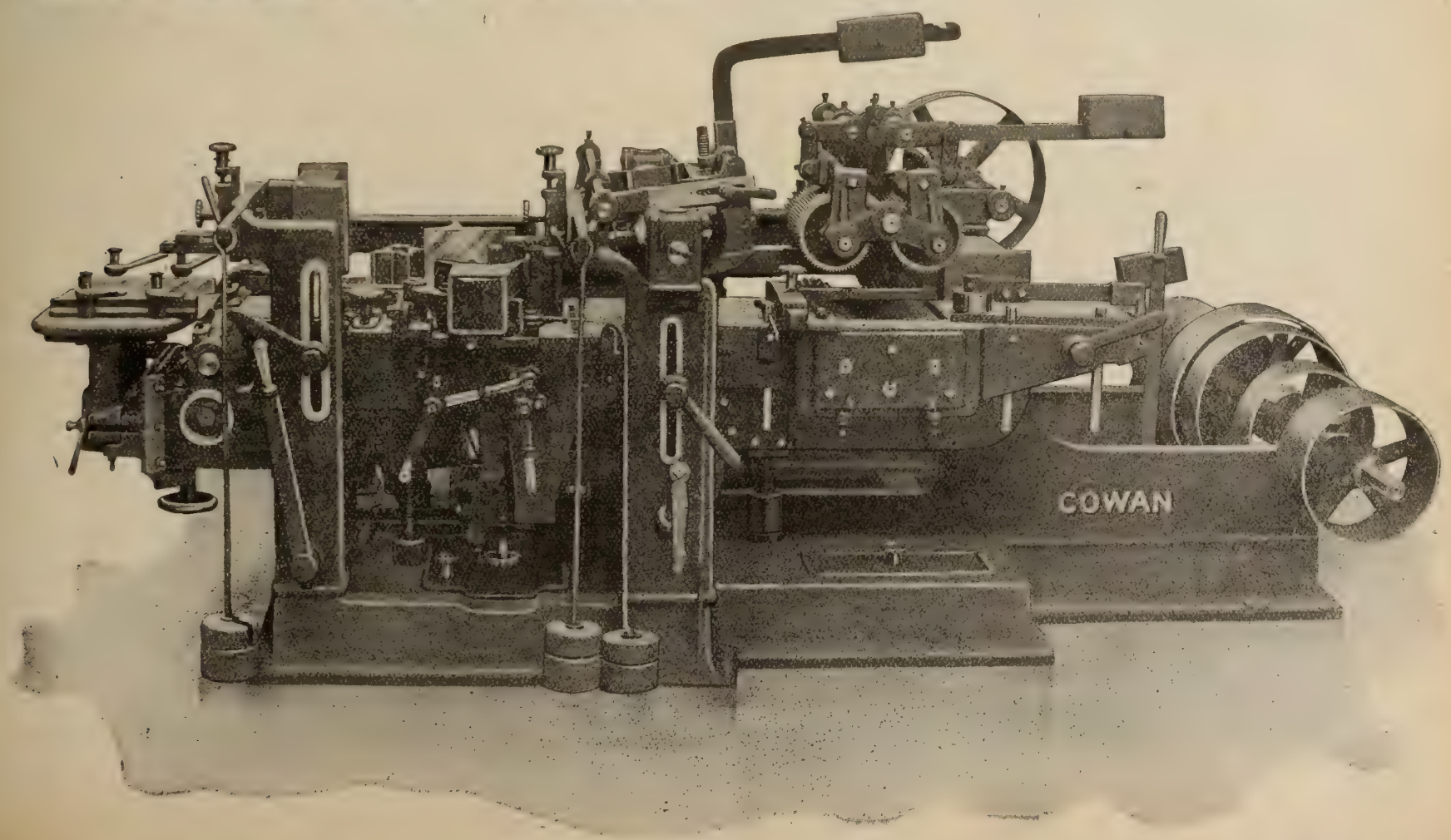

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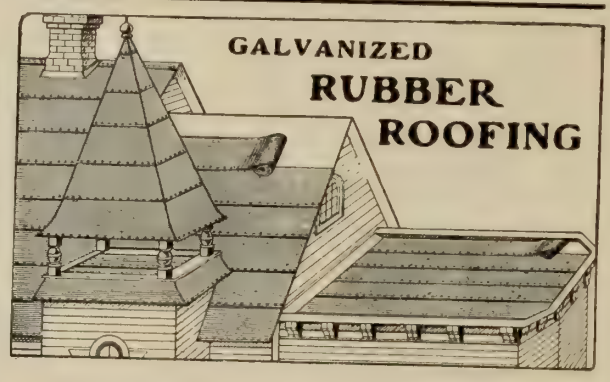

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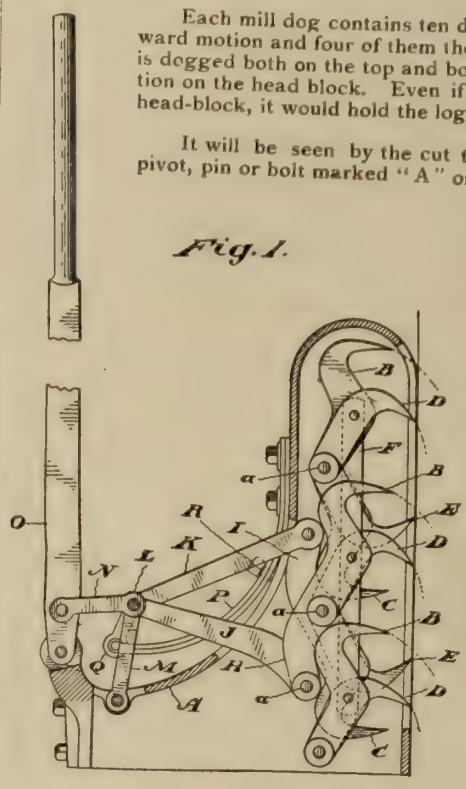

Fig. 1.

Each mill dog contains ten dogs; six of the dogs have the down-forward motion and four of them the upward motion, so that the log or cant is dogged both on the top and bottom, preventing it from turning its position on the head block. Even if the log were dogged, not touching the head-block, it would hold the log as well.

It will be seen by the cut that these ten dogs are fastened on the pivot, pin or bolt marked "A" on the cut, and connected with link bars from the principal dog to the lever "O," which operates all the dogs.

There are five of the dogs which project more than the others, about two inches from the head block, and called the log dogs; and five which project about ⅝ inch from the head-block, and called the board dogs; but when dogging a board or a plank or a stock, all the dogs come evenly out of the head block, about ⅝ inch, so that in dogging a board or a stock, both the log dogs and board dogs grip it, providing that the stock or board is wide enough to take all the dogs.

This patent mill dog will dog perfectly safe in all classes of timber, be it pine, hemlock or hardwood of any description, and besides it does not tear the board or stock.

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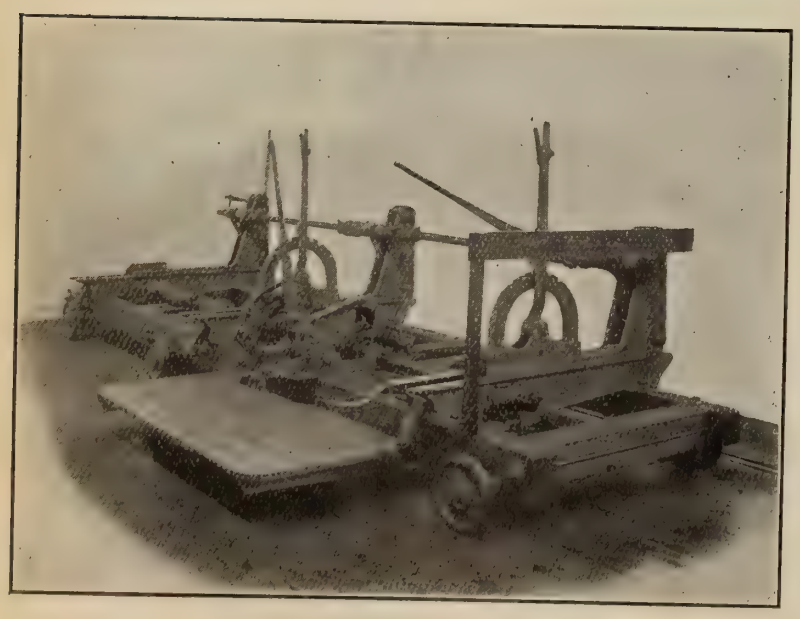
SAW, SHINGLE AND LATH MILL MACHINERY



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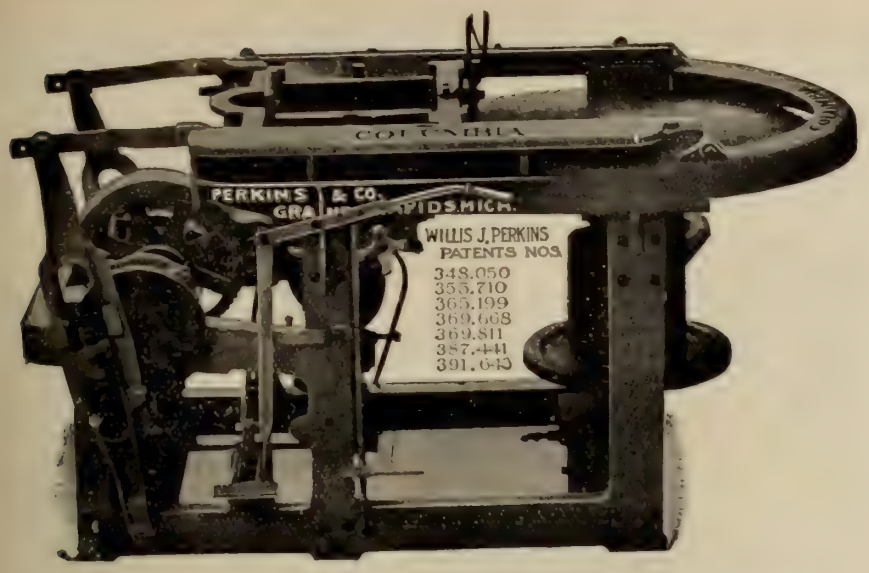

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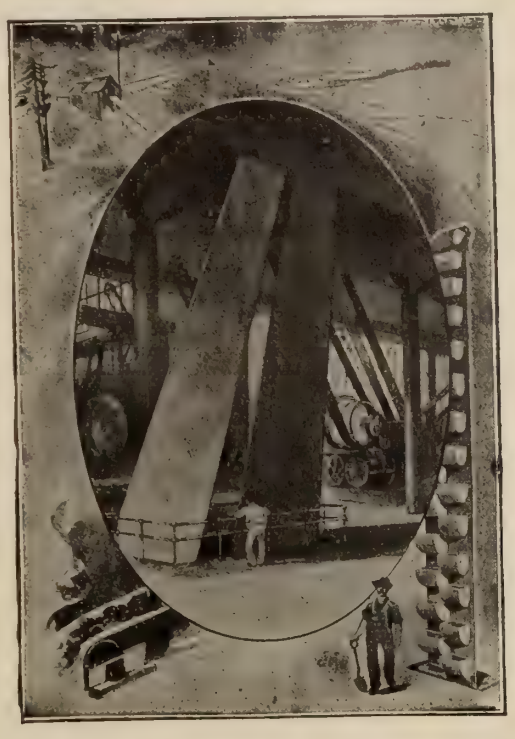

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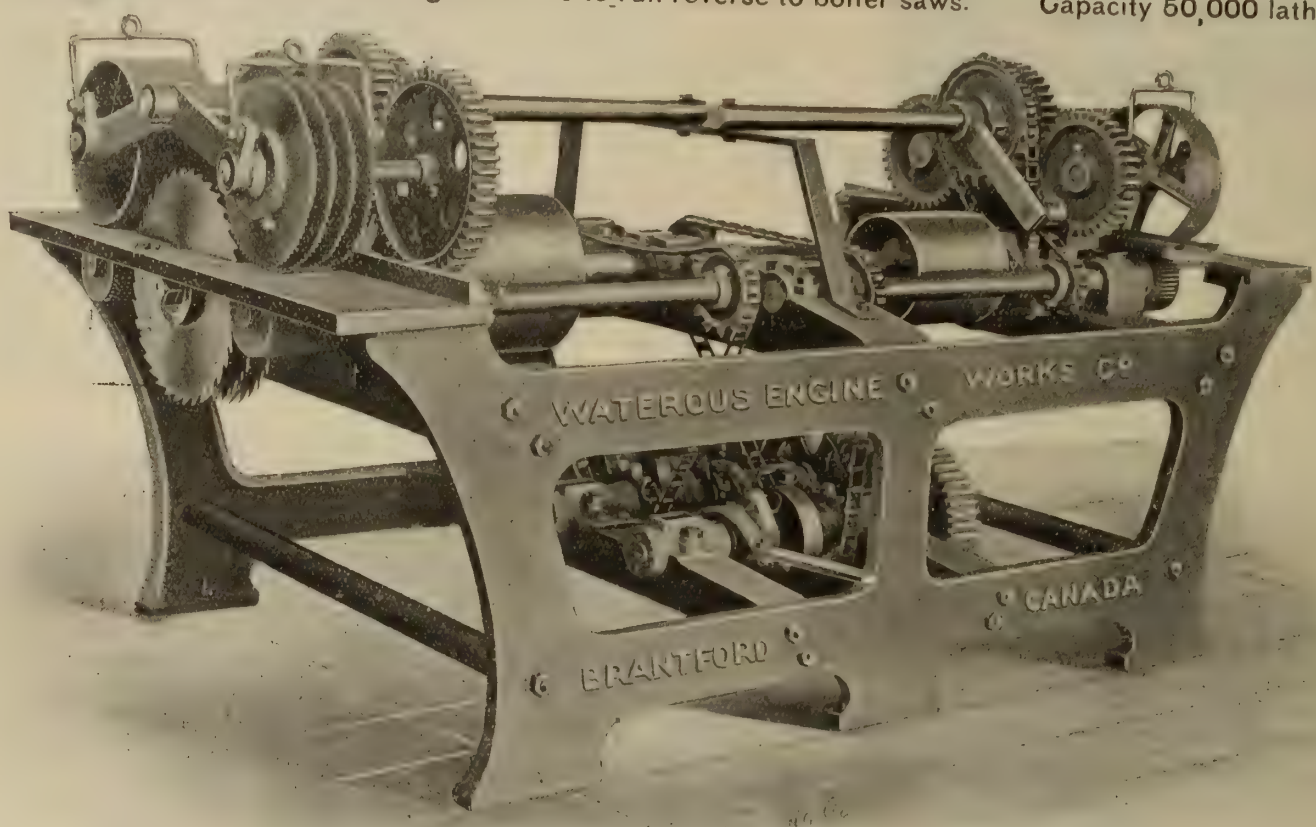

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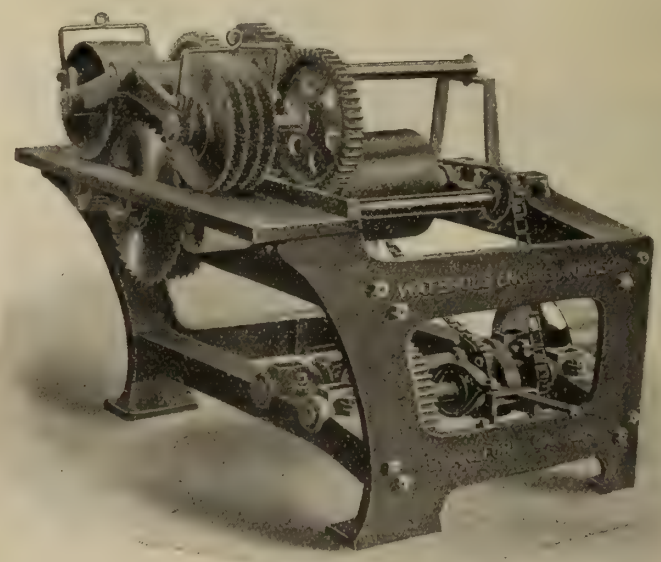

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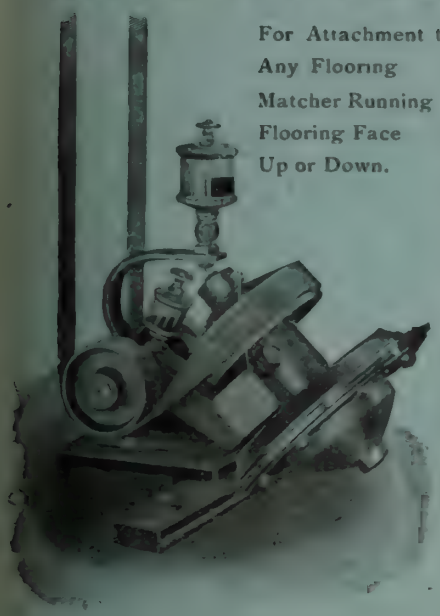

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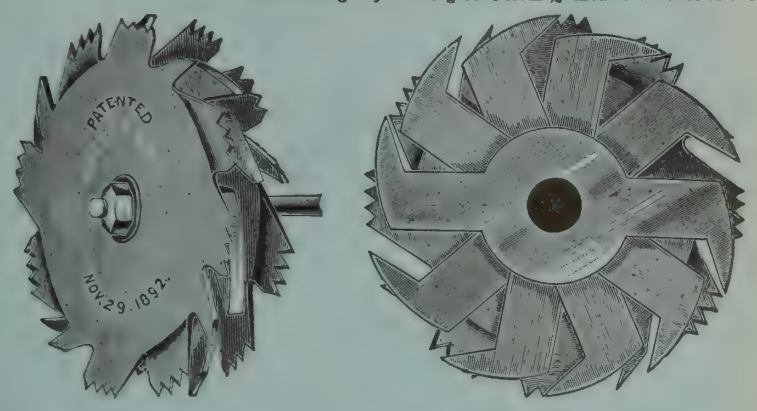

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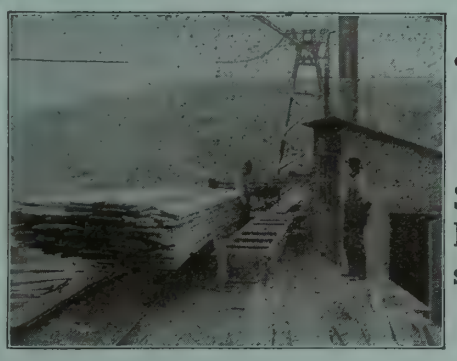

Slab, Saw Dust, Refuse, Log, Lumber, Offal, Conveyers shown in Saw Mill Catalog 57 B.

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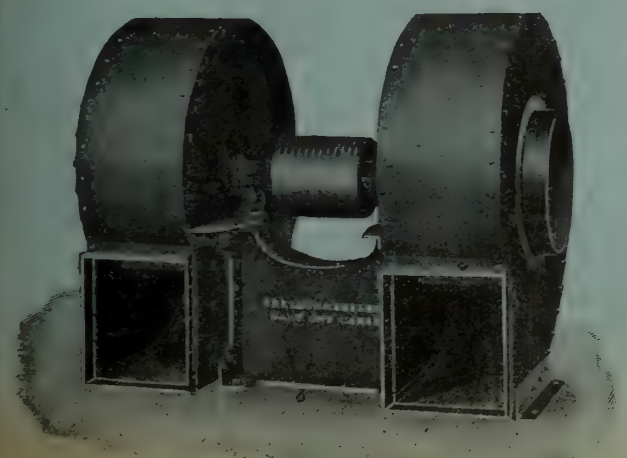

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NEPTUNE WATER-PROOF LEATHER BELTING?

IF NOT, WHY NOT?

You cannot afford to overlook this grade of belting.
Ask your neighbors what they think of it—they are using it.

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The GRATON & KNIGHT MFG. CO., Worcester, Mass.

Complete Stocks at Portland, Oregon; San Francisco, Cal.; Seattle, Wash., 219 Occidental Ave.

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SOMETHING NEW

You will find that by using

FREEZE'S PATENT BELT LACING TOOLS

you will save more than half the time usually lost in lacing belts. Consider—

How much do you lose every year by reason of machinery standing idle while belts are being laced.

You can stop over half of that leak by using the above named tools for running leather laces into belts. They will be sent to any address in Canada by mail on receipt of price with order, and with ordinary care they will last a life-time.

Price 50 Cents Each.

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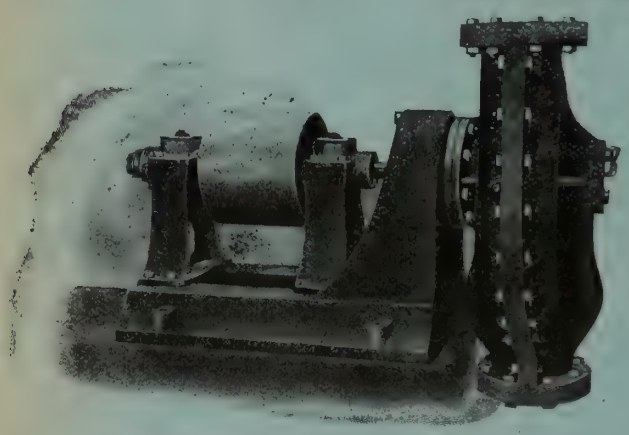

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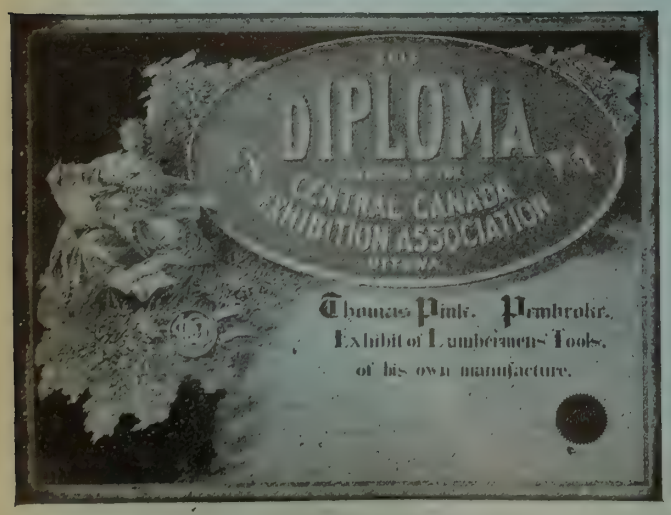

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The Standard Tools

In Every Province of the Dominion, New Zealand, Australia, Etc.

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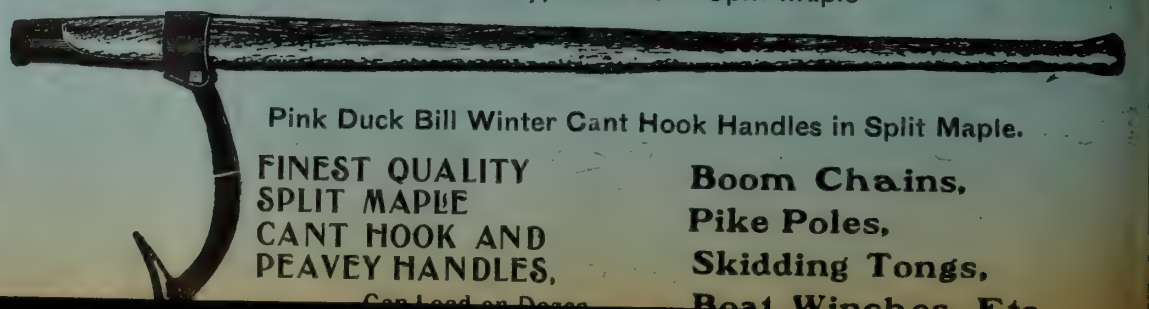

Pink Duck Bill Winter Cant Hook Handles in Split Maple.

FINEST QUALITY SPLIT MAPLE CANT HOOK AND PEAVEY HANDLES.

Boom Chains,
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REACHES REGULARLY MANUFACTURERS, BUYERS AND SELLERS OF TIMBER PRODUCTS IN EVERY PART OF CANADA AND LEADING IMPORTERS ABROAD

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Have been in the same business 50 years.
Know
a thing or two about same, and as experts declare
There is no better Babbitt than
FLEUR DE LIS
ANTI-FRICTION METAL

FOR SAW MILLS
PROVE IT!
The JAMES ROBERTSON COMPANY, Ltd.
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A Good Thing
A good thing is always worth the money. This is true of our belting.
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Never is affected by wetness, and does not stretch
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WRITE TO SOLE AGENTS:
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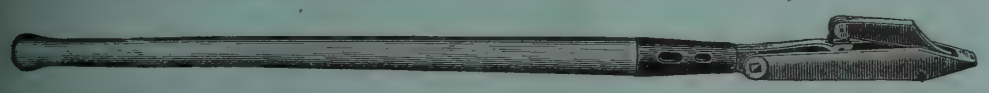

ATLAS CAR MOVERS WILL MOVE ANY CAR. ASK ANY USER.
CARRIED IN STOCK BY
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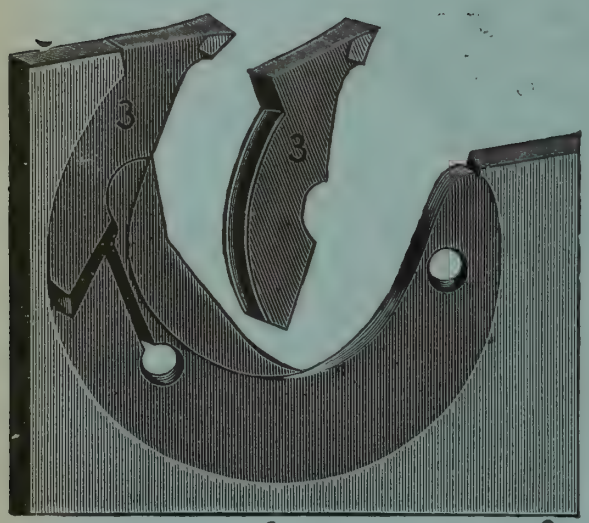
AMPHIBIA
WATERPROOF LEATHER BELTING
For the WET PLACES in the SAWMILL
Let us Send You Samples and Prices
SADLER & HAWORTH MONTREAL and TORONTO

R. H. SMITH CO., LIMITED

St. Catharines, Ont.

We are the Sole Manufacturers of Saws under the **Simond's Process** in the Dominion of Canada.

There is no process its equal for tempering circular saws. Other makers recognize this fact, as some of them, in order to sell their goods, claim to have the same process. **All such Claims are FALSE,** as the patentee in the U. S. and ourselves are the only firms in the world who use it.



INSERTED TOOTH SAWS

Notice the improved shank. We call particular attention to the swell which strengthens it at the weakest part and which gives it more wear than the old style.

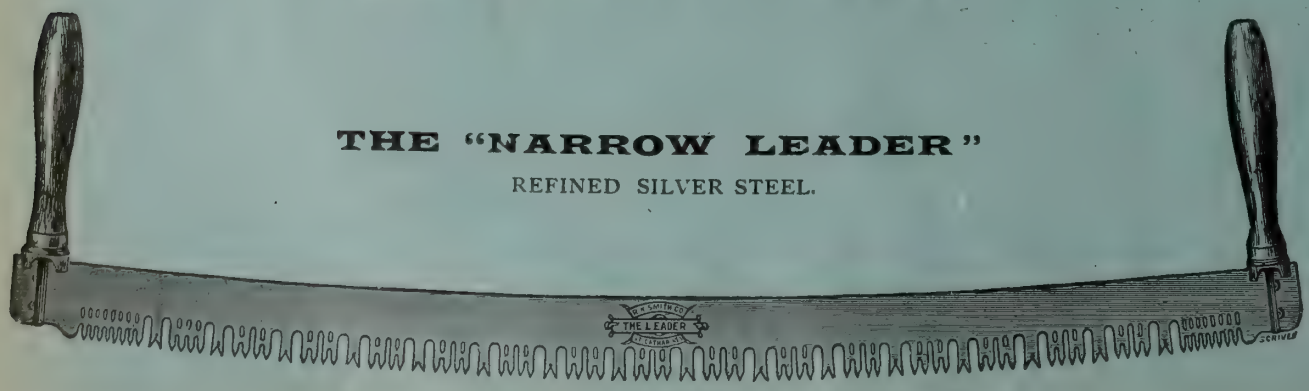
Shanks made in usual gauges and to fit your saws perfectly.

SHINGLE SAWS

The quality of the "Simonds" Shingle Saws is proven by the fact that the largest shingle and machine manufacturers in Canada are using them.

Run a "Simonds" and you will increase your output.

CROSS-CUT SAWS



The Simonds temper and style of tooth make the "Leader" the fastest and easiest cutting saw manufactured.

Write for prices.

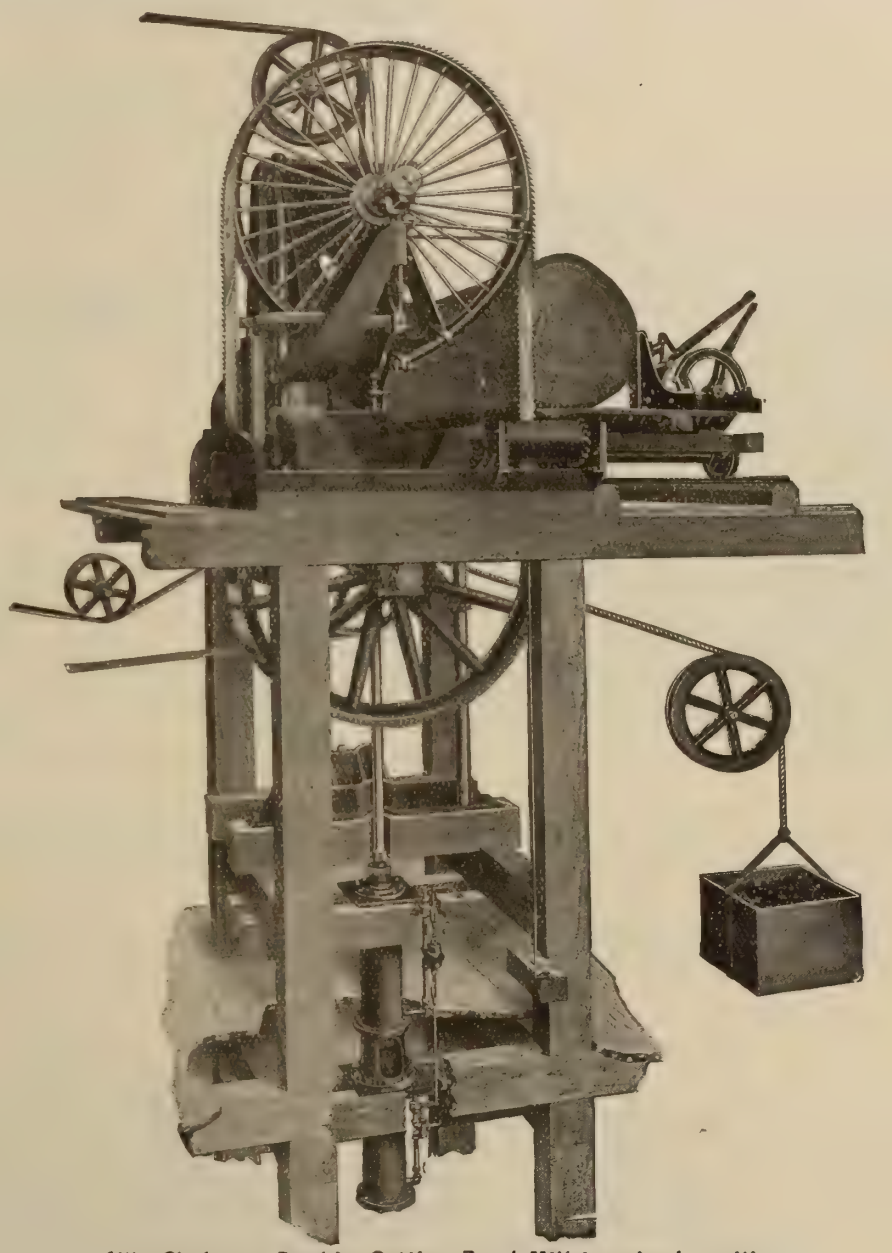
R. H. SMITH CO., Limited St. Catharines, Ont.

THE BAND MILL RECORD!

THE claim for a day's cut of ten hours from a double cutting band mill has been placed at an average of 7,500 feet per hour, but an Allis-Chalmers double band mill, installed in a mill of the El Dorado Lumber Company, of San Francisco, on the 27th of February, made a cutting of 8,620 feet per hour, or 86,205 feet per day of ten hours. This machine is a 14 inch double cut Allis band mill, and has been in use since the previous spring.

On the same day a single Allis band mill cut 73,964 feet, making a total of 160,169 feet for the day's run.

The record for the 27th, although remarkable, was somewhat bettered by the cutting made in the same mill with the same machines on the 28th, the day following. The single band mill cut 79,203 feet, and the double cutter 84,219 feet, both in ten hours, making a total of 163,422 feet for the day's run. The figures show that the cut of February 27th was not an extraordinary run for this mill.



Allis-Chalmers Double Cutting Band Mill in raised position for large log. See Bulletin 1700.

Allis-Chalmers-Bullock

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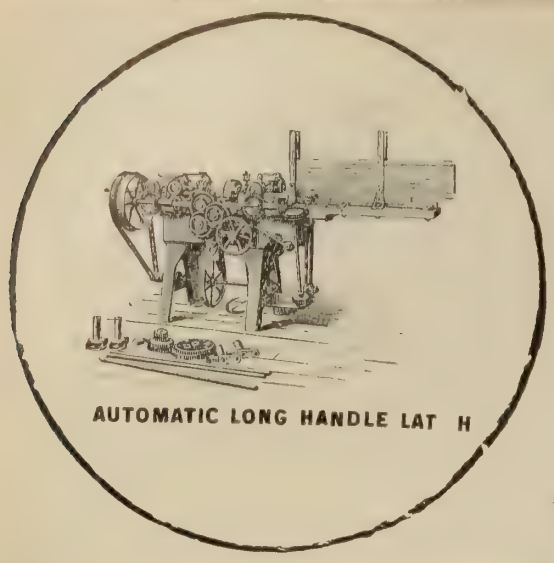

AUTOMATIC LONG HANDLE LAT H

"DEFIANCE"

Wood--Working Machinery

For Manufacturing

HUBS, SPOKES, WHEELS, WAGONS, CARRIAGES, RIMS, SHAFTS, POLES, NECK-YOKES, SINGLETREES, BARREL HOOPS.

Handles of Every Kind, Insulated Pins, Spools, Bobbins, Oval Wood Dishes, and General Wood-Work.

Invented and Built by

THE DEFIANCE MACHINE WORKS,
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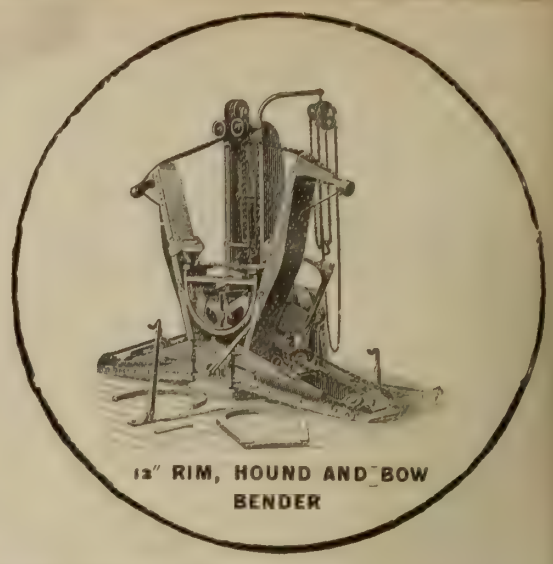
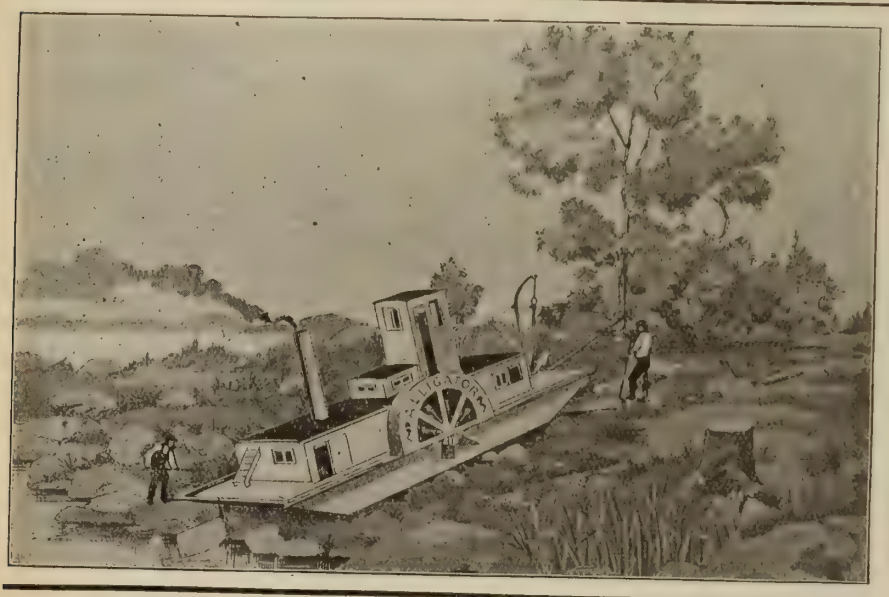


12" RIM, HOUND AND BOW BENDER



The

"Alligator" Steam Warping Tug

SIDE WHEELS OR TWIN SCREWS

The Twin Screws are arranged with flexible joint to raise up in crossing portage

MANUFACTURED BY

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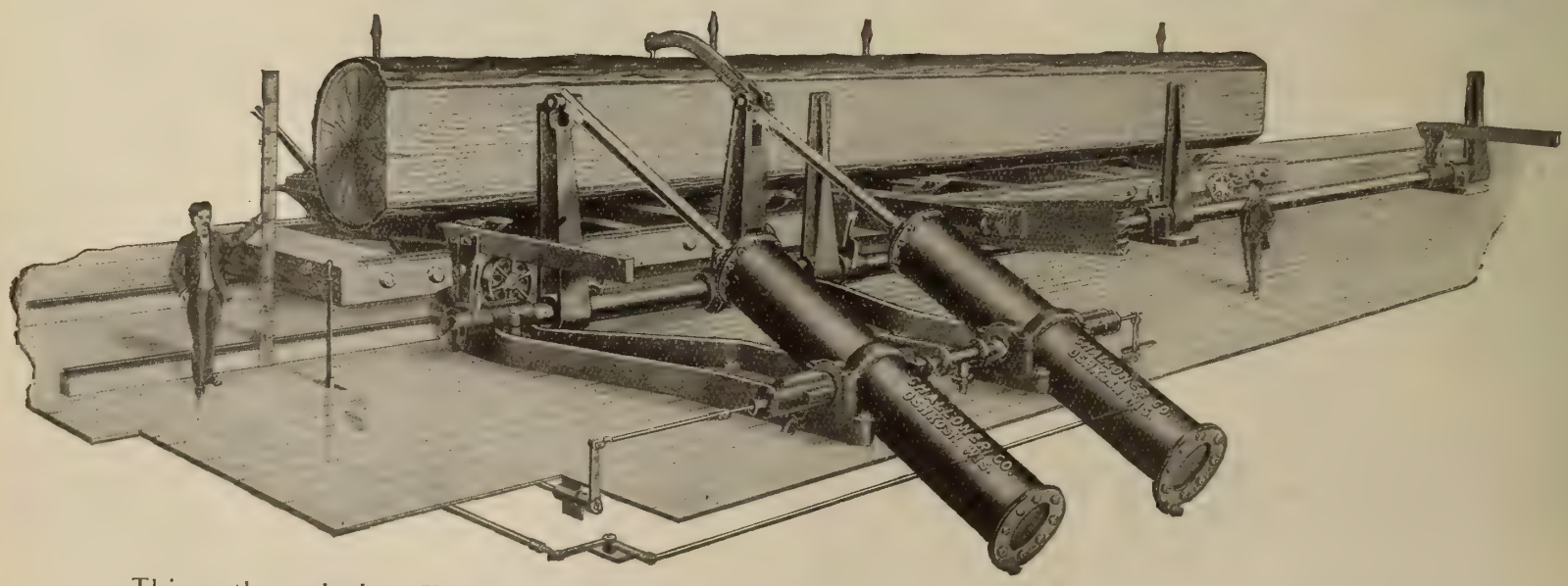
SIMCOE - - - ONTARIO

Cables carried in stock for renewals

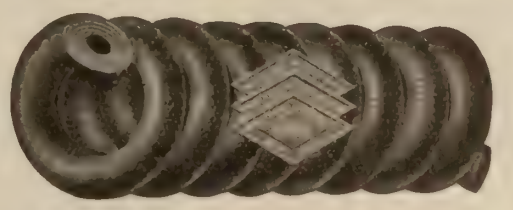
THE SIMONSON LOG TURNER



This is the only Log Turner that uses no tooth bar and turns the log away from the carriage.
The log is turned on the log deck, thus relieving the carriage of all strain and jar.
Will handle small logs as quickly as any "nigger" and logs scaling 500 feet and over much quicker. Will handle larger logs than is possible with a "nigger."
Don't buy a Log Turner of any kind till you investigate the Simonson.

CHALLONER COMPANY - OSHKOSH, WIS.

COBBS HIGH PRESSURE SPIRAL PISTON AND VALVE ROD PACKING



"Cobb's" Packing is especially adapted to withstand heat and highest pressure. The rubber core is oil and heat-proof and will not harden, but remain elastic indefinitely. The outside covering is made of material that is not affected by heat. The lubricant employed is the result of much scientific research and is absolutely free from grit or acids.

We make everything in rubber requisite for an engine room. The following are some of our specialties:

VULCAN SPIRAL PACKING, MAGIC EXPANSION SPIRAL PACKING, AMAZON HYDRAULIC SPIRAL PACKING, INDESTRUCTIBLE (WHITE), KARBONITE (BLACK) RUBY (RED), AND SALAMANDA SHEET PACKINGS, RUBY SECTIONAL GASKETS, GAUGE GLASS RINGS, DISCS, BIBB WASHERS, PUMP VALVES DIAPHRAGMS, PACKING RINGS, RUBBER BELTS, &C.

MANUFACTURED AND PATENTED EXCLUSIVELY BY

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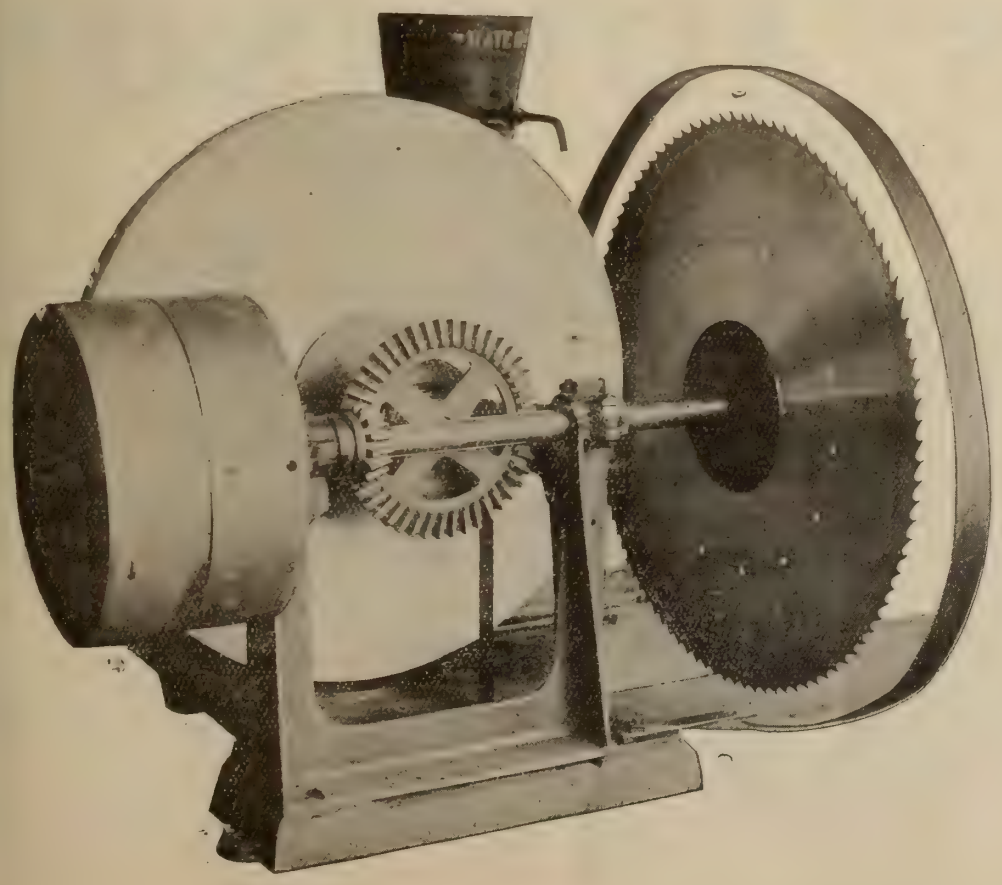
CANADIAN AGENTS: THE ECONOMICAL MANUFACTURING & SUPPLY CO., Limited
173 Queen Street East, TORONTO, CANADA



SHINGLE SAW GRINDER

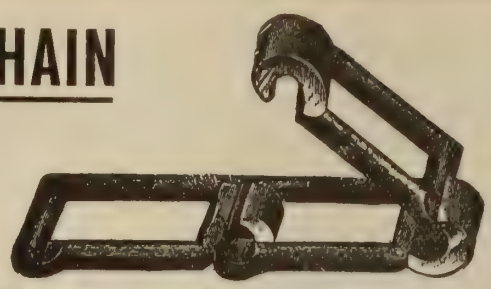
FOR keeping down the thickness of shingle saws and thereby saving timber, we are now putting on the market a grinding machine. It will at once be seen that we have made a radical change from anything at present on the market for this purpose. The saws are ground much quicker with the grindstone than with the emery wheel. It is also found that the grindstone does not roll the saws out of shape as the emery wheels do. The cut shows the machine so clearly that very little, if any, explanation is necessary. The shaft on which the saw is fastened is driven direct with the belt; the grindstone being driven with a bevel gear and pinion. The grindstone is made to move back and forth by the cam. The grindstone shaft is not at right angles to the saw shaft, but at an angle equal to the taper on the saw. This angle can be made greater or less by turning the eccentric sleeve in which one end of the shaft runs. The position of the feeding cam can be adjusted in or out by slacking up the bolts holding it and pushing it in the direction wanted. The machine is simplicity itself, and, as will be seen, is built very strongly.

Over three hundred of our Upright "Simplex" Shingle Machines (wood and iron frames) are in use in British Columbia and Washington.

MANUFACTURED ONLY BY

Letson & Burpee, Limited, Vancouver, B. C.

SPROCKET CHAIN



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ELEVATOR BUCKETS

ALL KINDS VERY FULL STOCK AND LOWEST PRICES

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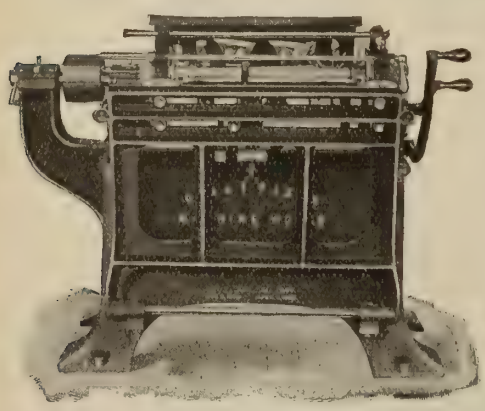
A Man who Could Turn 1,000 Balusters a Day



By hand, if such a thing were possible, would be regarded as invaluable.

Our No. 2 Baluster Machine

will enable a very common workman to produce that many, turning them out as steadily as clock-work, every piece smooth and perfect and true to pattern. Balusters, Spindles, Table Legs, etc., round or octagon, hard or soft wood.

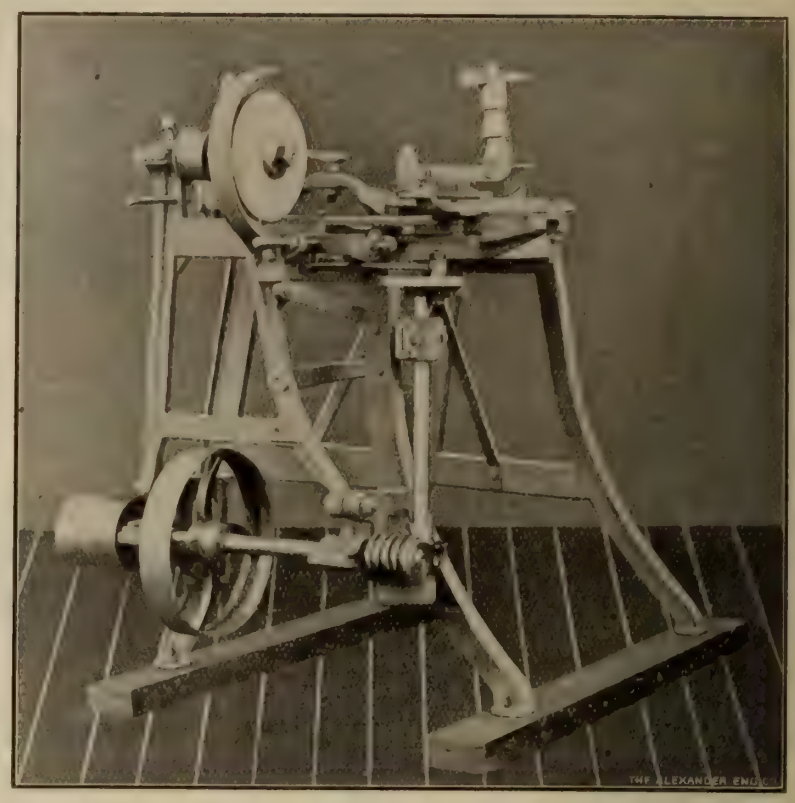
Hadn't you better look into it?
Glad to help you.

C. Mattison Machine Works, Beloit, Wis.

871 FIFTH STREET

Specialists in Automatic Wood Turning Machinery

NUMBER THREE SAW SHARPENER



The above cut shows our number three **Automatic Saw Sharpener,** for gumming and sharpening Circular Saws, either rip saws or cross cut saws; it will take a saw from 12" up to 84" in diameter; no mill should be without one of these machines; they are strong and will last a life time.

We manufacture **Saw Mill and Shingle Mill Machinery, Saw Carriages, Saw Frames, Log Decks, Loaders, Niggers, Set Works, Steam Feeds, Carriage Buffers, Live Rolls, Trimmers, Edgers, Lath Machines, Bolters, Etc.**

Write to us for Catalogue and Prices.

Mowry & Sons, Gravenhurst, Ont.

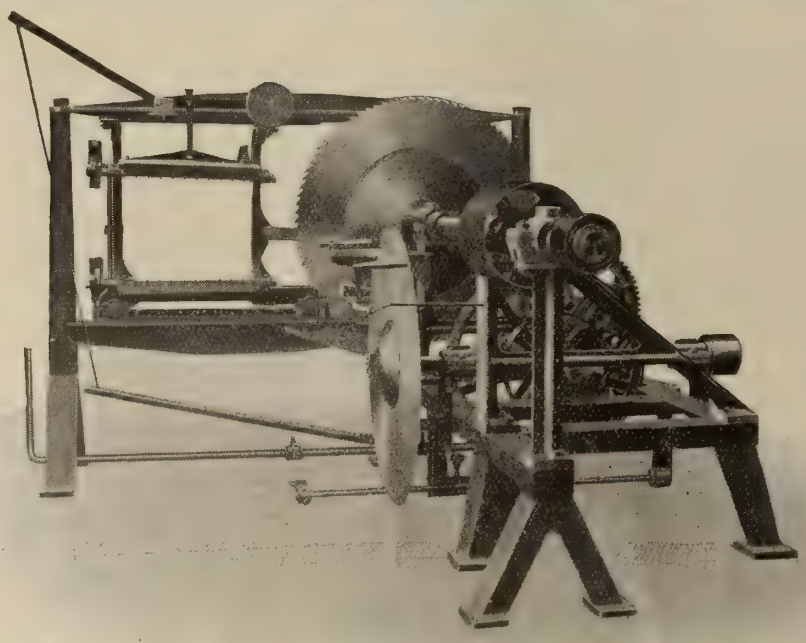
THE

FAMOUS JOHNSON

UPRIGHT SHINGLE MACHINE

Capacity 30,000 to 45,000
Shingles per ten hours

The Machine that has brought BRITISH COLUMBIA SHINGLES to the Front.



REASONS

Its construction is simplicity itself.

It is the envy of all its competitors.

If you want to make shingles that bring the highest price, you must use the Johnson Machine.

It has constantly added original improvements, which others try to follow, but the strides are too rapid, it always leads.

The Johnson machine is the only machine.

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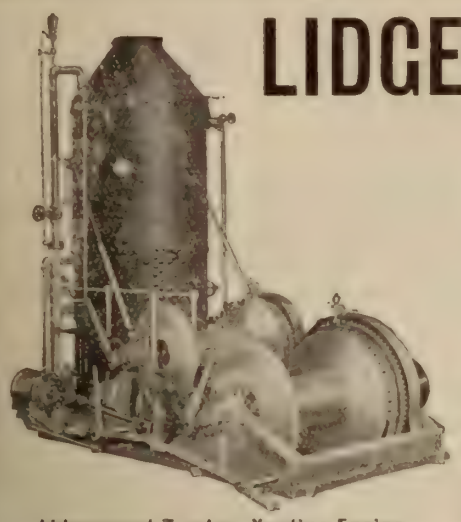
The Schaake Machine Works, Limited

NEW WESTMINSTER, British Columbia, and SEATTLE, Wash.



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LIDGERWOOD LOGGING ENGINES

(Important Features covered by Patents)

These cuts show two of our latest improved types for

PACIFIC COAST LOGGING

NOTE THEIR FEATURES

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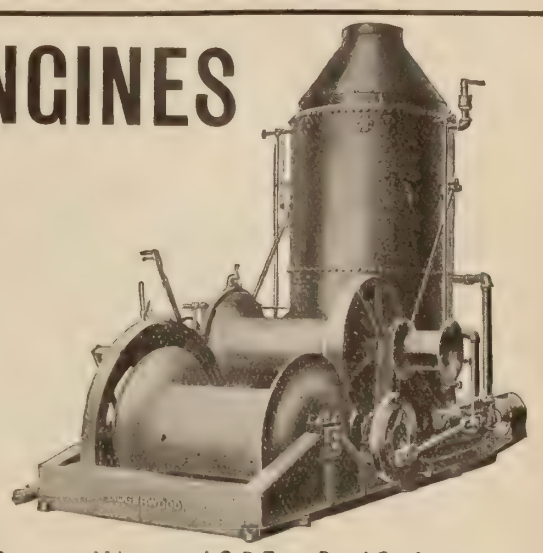

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PUMPS
SAW MILLS

COMPLETE SAW MILL EQUIPMENT

BELTING
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BLOWERS

SHAFTING

EXHAUSTERS

FORGES

PULLEYS WOOD AND STEEL

We can fill your orders no matter how small or how large they may be.

The CANADIAN FAIRBANKS CO., Limited

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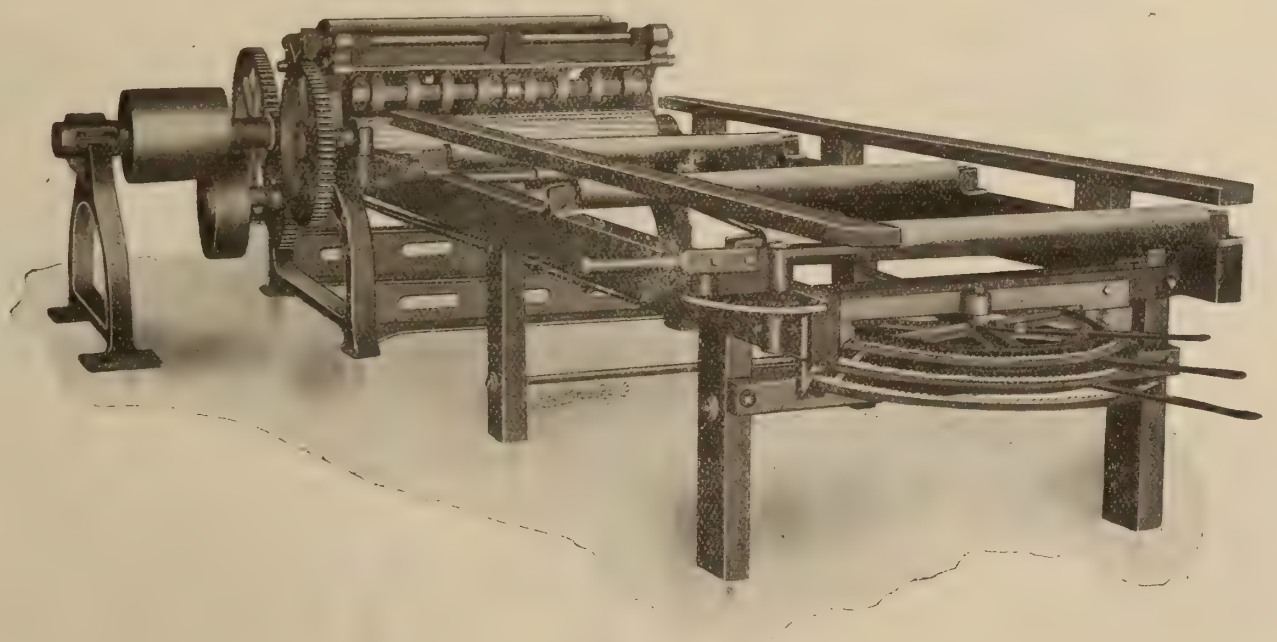
WE BUILD STEAM FEEDS, LOG JACKS, LIVE ROLLS, TRIMMERS, SLAB SLASHERS, STEAM NIGGERS,



No. 3 Four-Saw Edger with New Shifting Device

AND A COMPLETE LINE OF SAW MILL, SHINGLE MILL AND LATH MACHINERY

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THE YALE-COLUMBIA LUMBER COMPANY, LIMITED

Head Office: NELSON, B. C. Mills at Nakusp, Westley, Cascade and Nelson, B. C.

We Use American Lumberman Telecode

MANUFACTURERS OF

All Kinds Rough and Dressed Lumber, Mouldings, Lath, Etc.

DEALERS IN

Cedar and Fir Piles, Telephone and Telegraph Poles, Fence Posts, Etc.

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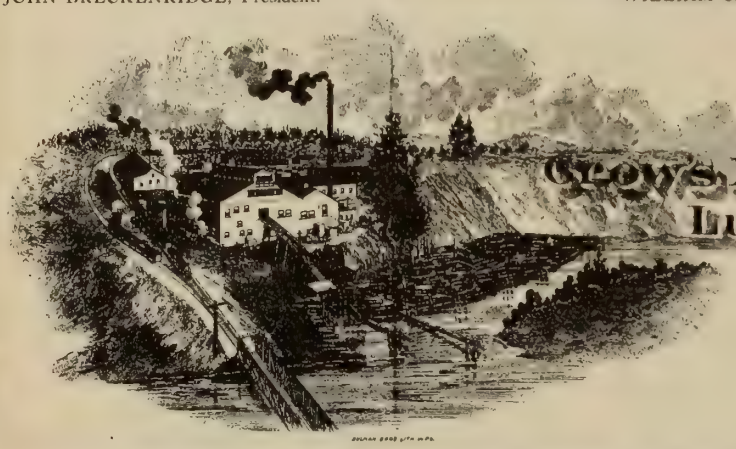

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Brunette Sawmill Company

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Sapperton, New Westminster, B.C.

Special attention given to Fir Timber orders

We cut up to 106 feet long and plane up to 16 in. x 30 in.

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Saw and Planing Mills at Ryan, Cranbrook and Jaffray, B. C.
Capacity 150,000 Feet per Day.

BUY E. K. L. Co.'s

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Lumber, Timber, and all kinds of Mouldings, also Dealers in Railway Ties, Piles and Poles.

Large Stocks of Well Seasoned Dry Material always on hand.

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Manufacturers of

CEDAR
WHITE PINE
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FIR PRODUCTS

Shiplap, Boards, Dimension
Siding, Finish, Lath, Shingles

Annual Capacity
50,000,000 feet

MILLS AT
REVELSTOKE, B. C.
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The North Star Lumber Company

MANUFACTURERS OF

Pine, Fir and Larch Lumber and Finishing

RESAWN BOARDS A SPECIALTY.

Elko, B. C.

The Fernie Lumber Co., Limited

MANUFACTURERS OF AND DEALERS IN ALL KINDS OF

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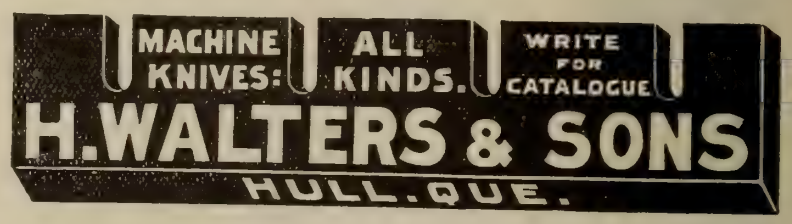

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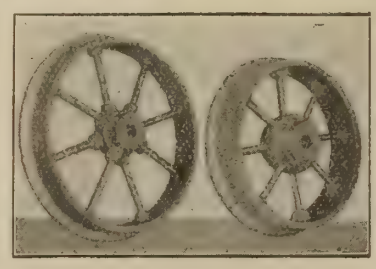

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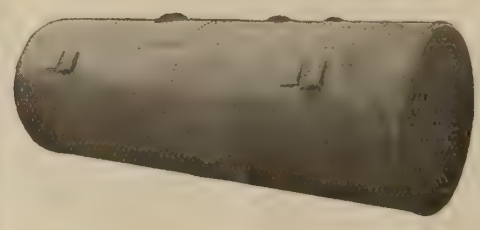

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CANADA LUMBERMAN
AND WOOD-WORKER

VOLUME XXVIII. NUMBER 10. } TORONTO, MONTREAL — OCTOBER, 1907 — WINNIPEG, VANCOUVER { TERMS, $1.00 PER YEAR Single Copies, 10 Cents

A NORTHERN ONTARIO MILL.

The great interest which has been taken in Northern Ontario for some time past has been centred chiefly upon the great mines. However, the mining interests are not, by any means, the only ones in this district. There is also great timber as well as mineral wealth. Several mills have sprung up through the country, but until last March, when Mr. Clement A. Foster completed his establishment at Haileybury, there was no mill in the district thoroughly equipped for handling a large cut.

Mr. Foster is a mining man, but sees the possibilities ahead of the lumber business in Northern Ontario. Moreover, he has pinned his faith to Haileybury as one of the large centres of the future. Having become interested in lumber, he decided last spring to build a mill which would answer any demands the growing town and district might make upon it.

The site for this mill is on Lake Temiskaming, which is destined to become a great mill pond. The mill proper is 38 feet in width and 132 feet in length, with an assorting shed 75 feet long and 25 feet wide. The boiler and engine house is a steel structure, 54 feet long and 44 feet wide. There are three boilers of 300 horse-power and two engines. The mill engine is of 150 horse-power, the secondary one being used for electric purposes.

The mill is a No. 2 circular, with a Kendal circular gang, having a capacity of 50,000 feet per day, and the machinery throughout was furnished by the Wm. Hamilton Manufacturing Company of Peterboro'. The mill has gunshot feed, with canters and loaders. There is a lath mill in connection. The whole plant is first-class and strictly up-to-date.

In addition to the saw mill, there is a planing mill with an independent engine of 60 horse-power, operating a double surfacer, matcher, moulder, corner block machine, turning lathe, an automatic rip saw and grinding machine. This machinery was furnished by the McGregor, Gourlay Company, Galt, while a shaving exhaust system was installed by Sheldons, Limited, of the same place, carrying the refuse from the planer into the boilers.

The whole plant is compact, the office building, stables and blacksmith shop being on lots adjacent to the mill yard. Mr. Foster has also built several very picturesque houses as homes for his mill employes, these aiding greatly in the general upbulding of that fine town of the north.

SAW AND PLANING MILLS OF C. A. FOSTER, HAILEYBURY, ONTARIO.

H. T. Warne, of the Sovereign Lumber Company, of Annis, B.C., which owns extensive timber limits in the Okanagan valley, recently returned from a trip to Nova Scotia for the purpose of engaging men to work in the woods. He secured about thirty, who went west with him.

CIRCULAR SAWING AND POWER.

I have read some time and somewhere (recently) of the power required to drive circular saws of various diameters. The note is as follows:—

"Three and one-half b.h.p. driving 18 in. saw will cut up to 6 in. deep for fencing and firewood; 5 b.h.p. and 6 1-2 b.h.p. driving 24 in. saw will cut up to 8 in. deep or 9 in. deals."

Now this is a very vague and indefinite account of the capabilities of an engine or of a circular saw. The amount or depth which a saw is able to cut does not depend on the power transmitted from the engine, but on the time taken to cut a certain amount or depth. It is expedient, if not imperative, that the speed of cutting should herewith be given. A 3 1-2 b.h.p. engine could drive a 42 in. saw and would cut 14 in. to 16 in. deep at a certain feed speed; consequently it is erroneous or unjust to confine the power of a 3 1-2 b.h.p. engine to the driving of an 18 in. saw cutting 6 in. deep. Of course the cutting with an 18 in. saw at 6 in. deep would be much more rapid than cutting 14 in. with a 42 in. saw with the same power, but if it was practicable to use a saw at 42 in. as thin as one of 18 in. the larger saw would cut the wood quicker than the other, i.e., 6 in.

The limit of the engine's power is not confined to any depth of cut, but to the speed of

feed. Thus a 3 1-2 h.p. motor will drive a saw 36 in. in diameter and cut 12 in. quite satisfactorily, with the exception that the operation is not so rapid as when 6 b.h.p or 10 b.h.p is applied.

It is almost impossible to state what power saws of certain diameter takes, as a skilful man can work his saws with from 2 h.p. to 4 h.p. less than he who is somewhat inexperienced and lacks the essential dexterity which such a machine requires when complicated contingencies arise.

There are many causes which affect or retard motive power, a few of which are:—

(1) Working a saw which is too thick.

(2) Improper angles and trimming of saw teeth.

(3) Excessive pressure on and impracticable application of packing.

(4) Working the saw when too blunt.

Production and feed speed is the only correct or reliable means by which the power of an engine or the efficiency of a machine can be determined. A 3 1-2 b.h.p. engine may cut 6 in. deep at the rate of 20 feet per minute, but probably a 6 h.p. motor or engine would give out sufficient power to cut the same depth and material at 60 feet per minute.—"A. M." in The Timber News.

PRELIMINARY HEARING ALBERTA LUMBER COMBINE INVESTIGATION.

Considerable interest has been aroused in the west regarding the action of the Provincial Legislature against the Alberta Retail Lumbermen's Association, which opened in Edmonton on September 5th, before Inspector Worsley. S. B. Woods, Deputy Attorney-General of Alberta, appeared for the prosecution, and R. B. Bennett, of Calgary, for the lumbermen. From all appearances it looks very much as if the Government have commenced their action thoroughly convinced that an illegal combination to restrain trade does undoubtedly exist among the Alberta lumbermen, and equally as thoroughly decided to prove such to be the case.

Corroboration of this view of the Government's attitude is given by Mr. G. P. Wells, former secretary of the Mountain Lumbermen's Association, and Mr. Anstie, who succeeded Mr. Wells in that office. Both these gentlemen were summoned to Edmonton as witnesses and expressed themselves in indignant terms regarding the manner in which the investigation is being conducted. They say it seems as if the Government has made the result a foregone conclusion. The crux of the whole matter, according to Mr. Anstie, is that the Government is endeavoring to prove a combination between the lumbermen of British Columbia and the Alberta Retail Lumber Dealers' Association. There is an attempt being made to prove that no lumber would be sold to any retailer of Alberta unless he was a member of the retail association, an imputation which, in their evidence, was denied by Mr. Wells and Mr. Anstie, both declaring emphatically that the Mountain Lumbermen's Association had sold impartially to members and non-members of the Alberta Retail Association. This fact, Mr. Anstie complains, has been deliberately suppressed by the Edmonton press. There has been no attempt, says Mr. Wells, to prove that the prices of lumber are too high, the Alberta Government contenting themselves with striving to prove the alleged combination aforesaid.

All witnesses who had been examined at the Ottawa investigation last spring testified that they had destroyed the documentary evidence there produced by them. Mr. A.M. Grogan, secretary of the Alberta Retail Lumber Dealers' Association, stated that he was highly displeased with the way the documents were treated at Ottawa. Members of the House, who were not on the Parliamentary Commission of investigation, had access to the letters and papers. He resolved there that when he obtained possession of them again he would put them out of the way. When he received the documents from Ottawa he burned them without looking them over. Secretary Wells did the same thing. Secretary Alexander saved the minute book of the defunct coast millmen's association, and a number of letters and price lists which the executive of the association considered necessary for the inception of the business of the incorporated company which was formed last March to supersede the old association.

By arrangement of counsel the charge against one of the defendants, W. H. Clark, of Edmonton, was first taken up. Secretary Grogan testified that he had a list of the millmen of both of the Mountain Mills Association and of the British Columbia Lumber & Shingle Manufacturing Company, Limited, and that, pursuant to a resolution passed in Edmonton by the Alberta Retailers' Association, he sent to the two millmen's associations lists of dealers in Alberta, which list comprised the members of the Alberta Retail Lumber Dealers' Association. Moreover, one of his duties was to consider and transmit the complaints of retailers to the millmen for shipping to consumers direct, and to men who had no yards. No complaints save those of members of the association were considered. If he found that a certain mill continued to supply a firm or individual who was not a member of the association, he would call a meeting of the directors. The province is divided into districts, the boundaries of which are fixed, each district being in charge of a director.

Mr. Wells testified that he was the former secretary of the Mountain Mills' Association, but resigned last June after the documents came back from Ottawa. After receiving the documents he burned them. He never consulted with Mr. Grogan in reference to this destruction of documentary evidence and merely retained what was necessary for his successor in office. He destroyed the minute books, thinking them dead matter and quite useless, as also the by-laws and price lists. Mr. Wells opiniated that the large mills, by opening up yards in Alberta, made the small mills "hot." They thought the big mills would cut rates, hence an association was necessary to control prices. There was an understanding that members of the Mountain Mills' Association would ship to legitimate dealers only.

R. H. H. Alexander, secretary of the British Columbia Lumber & Shingle Manufacturing Company, Limited, testified that the old Coast Mills Association had been superseded by a limited incorporated company. Members of the old association were required to take an affidavit that they would not cut prices, alter terms nor sell to any but members of the association. Mr. Alexander's cross-examination elicited the information that manufacturers and retailers of lumber consider the lumber business analogous to the grocery trade, and that the object of their organizations is to maintain the trade within the limits prescribed by other and older trade guilds. There is no combine. The organization is for the purpose of promoting the lumber trade on modern business methods, there being an understanding between the Mountain Mills' Association and the British Columbia Lumber & Shingle Manufacturing Company to maintain an equality of prices for that purposes.

Mr. F. D. Becker, vice-president of the Alberta Retail Lumber Dealers' Association, who is now secretary-treasurer of the Monarch Lumber Company, Savonas, B.C., described the steps leading up to the formation of the Alberta Retailers' Association, stating that its object was to prevent competition between wholesalers and retailers, the only obligation binding those interested being their word of honor. The Alberta Association never threatened the manufacturers with fines, penalties or boycotting if they did not refrain from dealing with consumers. Witness gave a list of firms in the province who carried on the lumber business and were not members of the Retailers' Association. He knew of no discrimination against those who did not belong to the association.

Mr. J. W. McNichol, of Lethbridge, stated that he was one of the directors of the Alberta Retailers' Association. Each director had charge of a certain district. Mr. McNichol's duties were to get all the dealers in his district into the association. He went on missionary trips at $5 per day plus railroad fare to the other districts to complete the organization. The object in organizing districts was for the purpose of arranging such matters as grading, granting credits and in maintaining uniformity of prices. Mr. McNichol stated that it was his duty to get the dealers who were not members to work in harmony with the association which was opposed to selling to consumers. He did not know what prices were outside his own district, but stated that it was a matter of honor to stick to a uniform rate, and that the breaking of prices would constitute a complaint. To Mr. Woods Mr. McNichol stated that his credit for last year indicated a gross profit of between 20 and 21 per cent. He had no objection to producing the auditors' statement provided it was not published in the press.

Mr. H. J. Helliwell, secretary of the Edmonton Lumber Dealers' Association, admitted that pursuant to advice from Mr. Grogan he had done some organization work among the lumber dealers of the province, but denied that there was any connection between the Edmonton and provincial associations.

TRAGIC DEATH OF MR. W. A. ARMSTRONG.

The name of "Armstrong" is a household word in the little town of Markdale, on the Owen Sound division of the C. P. R. Here the firm of Armstrong Bros. have carried on business ever since the place was known. When, therefore, the news of the tragic death of Mr. W. A. Armstrong in the railway wreck at Caledon reached the town, the darkest gloom spread over the community. Two brothers and a little son of the deceased were also injured.

The late Mr. Armstrong was a prominent and much respected citizen, and his loss is most keenly felt. The high esteem

The Late Mr. W. A. Armstrong.

Mr. Mark Armstrong.

in which he was held was strikingly evinced by the large congregation that assembled to participate in the solemn and exceedingly impressive funeral service. Rev. Mr. Wilson referred to him as a man of reliable spiritual intuitions, fidelity to conviction and loyalty to the supreme claims of God upon his life and service, a man who in all his domestic, social, business and church relations manifested all the attributes of a refined Christian gentleman.

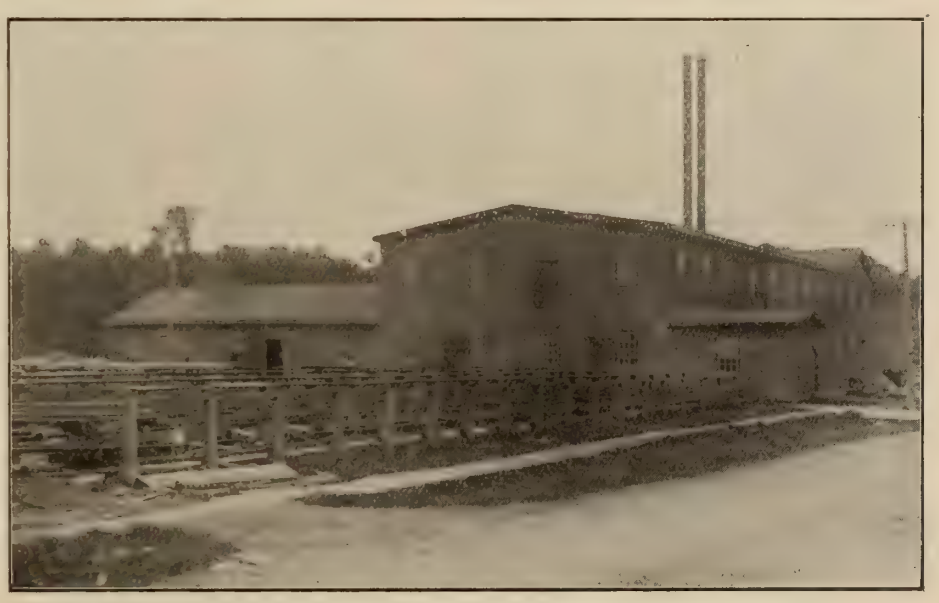
Mr. Armstrong was likewise a man of wonderful resource. An expert millwright and mechanic, he would overcome obstacles which to others seemed insurmountable. It has been said of him that he was never conquered, but always found a satisfactory solution of any problem with which he was confronted. His executive qualities were also above the average, which, coupled with his inventive genius, made him of incalculable value to the business with which he was connected.

The firm of Armstrong Bros. was composed of the late Mr. W. A. Armstrong and Mr. Mark Armstrong, both of whom were born at the Maple Hill farm at Markdale. Twenty-two years ago they decided to enter the manufacturing field, and although suffering severely by fire about thirteen years ago, they have since succeeded by perseverence, integrity and ability, in building up a prosperous trade in veneer and wood specialties, and to-day they are probably the largest manufacturers of cheese box veener in Canada. They have at Markdale, in addition to the factory shown in the illustration, a saw mill and 300 acres of timber limits. They were about to commence the manufacture of wagons, an industry which it was believed could be carried on to advantage in conjunction with their saw milling and wood specialty business.

In addition to the Markdale property, the firm own and operate a saw mill and veneer factory at Rockvale, five miles from Flesherton, on the Owen Sound division of the C. P. R. The saw mill contains a complete circular saw outfit, two tubular boilers equipped with Dutch ovens, and a slide valve engine of 125 h.p., as well as shingle machinery. The veneer factory is equipped with a heavy 7 1-2 foot rotary veneer machine, made by the Coe Manufacturing Company, of Painesville, Ohio, veneer sizers, steaming vats, drying racks, etc.

The timber land in connection with the Rockvale property consists of 1,100 acres, estimated to contain over 6,000,000 feet of hard maple, soft and rock elm, basswood, birch, beech, cedar and hemlock.

Owing to the untimely death of Mr. W. A. Armstrong, the business of the firm is now being liquidated by the surviving partner, Mr. Mark Armstrong.



Factory of Armstrong Bros., Veneer and Wood Specialties, Markdale, Ont.

THE THURLOW LUMBER COMPANY.

The "Thurlow Lumber Company, Limited, is the name of a new lumber manufacturing concern that has lately commenced operations in British Columbia. The company was organized on January 14 last, with an authorized capital of $25,000, head office being at 2027 Granville street, Vancouver. The mill is located on Blind Channel, Thurlow Island, a few miles from Vancouver. The timber limits, which are immediately adjoining the mill site, cover in all 1,920 acres, and consist principally of cedar. This area of cedar is claimed to be one of the finest still uncut, the trees averaging from five to twelve feet in diameter.

The mill itself has a daily capacity of 25,000 feet. Its mechanical equipment includes a circular saw mill, from the E. Long Manufacturing Company, Orillia, a steam gunshot feed carriage, a three saw gang edger, slab slashers and trimmer saw table, with the usual complement of rolls and transfer. The company is also installing a shingle mill, comprising three "Simplex" shingle machines from the Letson & Burpee Manufacturing Company, Vancouver.

The power plant consists of a 60 inch x 16 foot Jenkes boiler, equipped with Dutch oven, and a 15 x 20 inch Atlas engine. The power plant running gear and all the saw mill machinery were supplied through the A. R. Williams Machinery Company, of Vancouver.

The officers of the company are:—President, A. E. Coffin; vice-president, A. Campbell; secretary-treasurer, D. C. Little, all of Vancouver, and F. Appleyard, superintendent at the mill. The company commenced cutting last month.

PERSONAL.

Mr. Robert McNair, proprietor of the McNair Shingle Company, Vancouver, left on September 17 for a six weeks' visit to his old home at Eel River, Que.

Mr. H. H. Spicer, manager of the Export Lumber & Shingle Company, Vancouver, is at present on a combined business and pleasure trip throughout the Prairie Provinces. While away Mr. Spicer will visit Calgary and Edmonton, and thence go to Winnipeg over the Canadian Northern Railway, returning by way of the C.P.R. main line and Crow's Nest Pass branch. He will be absent about a month.

Mr. Chas. Henderson, Crown timber agent, Sudbury, was in Toronto recently.

J. M. Agnew, secretary of the Baker Lumber Company, Limited, of Waldo, B.C., has been gazetted as a Justice of the Peace.

Mr. J. D. Moody, the general manager of the Vancouver Lumber Company, has gone on a three months' trip to the Southern States.

Dr. Judson F. Clark, late Provincial Forester for Ontario, and who is now engaged in lumbering operations in British Columbia, was in the east recently renewing acquaintances.

Mr. Graham Fraser, of New Glasgow, N.S., one of the directors and principal stockholders in the McNair-Fraser Lumber Company, Limited, of Vancouver, is at present visiting the Pacific coast, accompanied by Mrs. Fraser. Mr. Fraser was president of the Dominion Steel Company and is now taking an active interest in British Columbia timber products. He expects to remain west for some weeks.

The Fear of Losing Trade*

By G. H. Wall.

It is rather unfortunate for you that someone more able than myself was not entrusted with the duty of preparing an article which would have been more entertaining and more instructive than anything I can present. I have no hope of telling you anything new, but like Marc Anthony, will "tell you that which you yourselves do know." But as it requires many blows to drive the nail that holds, so may constant repetition drive some right principles into our heads to stay; principles which we may have long ago recognized as correct, but which for some reason we have failed to adopt. So, if any of you have these mental nails sticking up, either through their never having been driven, or drawn through warping, I shall be more than pleased if I succeed in driving them back to the sticking point.

The retail lumber business is regarded by those outside the ranks as the safest, pleasantest and most profitable of all mercantile pursuits. And I believe this opinion would be correct, if the majority of us were not pursued night and day by a ghost almost as grim as death itself. This spectre I have named "The fear of losing trade."

There is an old saying that "Imagination is as bad as reality, as long as it lasts," and this fear of losing trade certainly justifies the same, as it has the power of driving many business men from the paths of good business principles into the jungle of false methods.

There is only one reason why men enter the lumber business, and that is to make money. There may be rare instances when it is done for spite, but this happens so seldom that it need not claim the attention of the general trade. How then shall we get the best results from our time and capital? What opposing forces shall we meet which, if not overcome will materially lessen our profits, and possibly wreck our business? The percentage of profits which our capital yields is an essential point of which many of us lose sight. If our net profit is $4,000 and our capital is $20,000 the percentage of profit is 20 per cent. But if we are using $50,000 in order to accomplish the same result, our profit is only 8 per cent. It is the part of wisdom, then, to keep our investment as low as possible and still be in a position to take care of the trade that rightfully belongs to us.

The stock will first claim our attention. In regard to the stock carried there is perhaps no other business which has changed so rapidly as ours during the last few years. There was a time when three or four thousand dollars would buy a large and complete stock for the average country yard. It was sufficient to have on hand one grade of dimension, one kind of ship lap, not more than two grades each of flooring, siding and ceiling. In the yards of to-day see the variety! Spruce lumber, mountain lumber, coast lumber in cedar and fir; from five to ten kinds of siding, the same of ceiling and almost as many of flooring; ship-lap in 6 inches, 8 inches and 10 inches in several kinds of wood, and two grades of each. All this may be very well in large city yards where there are so many to please, but it is certainly a mistake in the average country yards. Your stock is not only doubled but you will soon find several piles around the yard, none of which is sufficient for a job, yet they will not match with anything else.

Your competitor carries all these kinds, does he? My friend, the fear of losing trade is upon you.

The next and usually the largest investment is the outstanding accounts. Only by constant care in extending credits can we keep our investments within reasonable, money-making bounds. The abuse of the credit system is the curse of any business. First, there are the poor-paying customers. Suppose you sell equal amounts of lumber to four of them, and after hiring a few livery rigs and constant running and dunning, you succeed in collecting three of the accounts, with the fourth a total loss, what have you made on the four sales? You have probably made four enemies, who will spend their cash with your competitor, who was wise enough to turn down doubtful customers; and your profits on these transactions will appear as if seen through a reversed telescope—very small and a long way off.

Then, there is the rich customer, who is so all-fired good that he must never be asked for money, or a note, or interest—what, interest! Is it possible that we have the colossal gall to ask him to pay interest! All right. If that is the kind of wolf we are he will pay us at once. Then he reminds us that we know his account is good. And instead of our answering that his account is good to us when it is paid, the great fear of losing his trade comes over us, and we are routed horse and foot. We tell him that we know he is good; that we can get along without the money; that he need not mind (and subsequent events prove that he does not, for the money is not forthcoming).

Then there is the man who wants your very lowest, spot cash price on a bill of lumber. This is in April. He does not hesitate to let you know that your competitor has better lumber than you carry, and that every dealer within twenty miles is figuring on the bill, and he cheerfully informs you that you must be the lowest or you can't have the bill. While you are figuring the great fear steals upon you. If Smith doesn't cut the price, Jones will. You specify the best grades, and as you must be the lowest in price, you name a figure close to cost. Well, the sale is made, and the customer starts hauling. In the course of a few weeks the bill is all delivered except a little moulding and a few brackets, but you haven't seen any of the spot cash. "Oh, yes! the customer is going to pay cash but he hasn't taken all the material." In another month he brings you about one-quarter of the agreed amount, with the promise that he will have some money for you "in a few days." About August you muster up courage to ask for what you should have demanded long ago; but it is now only a little while till harvest, and "You can wait until after harvest." In September he hasn't threshed; in October he is ploughing; in November he hasn't sold his grain, as the price doesn't suit. And during all this time the great fear has whispered to you, "Don't crowd him." Maybe he will build more next spring.

Then there is the man who asks for time "until fall." He is worthy of credit, and you make the sale. And so the outstanding grows. I am confident that the average dealer is using from 25 to 50 per cent more capital than is needed, and that a large part of this surplus is in open accounts. A dealer in Manitoba recently said, "I am worth $50,000; $10,000 is in stock and the farmers have the other $40,000, so I haven't got a dollar."

This dealer could operate two similar yards with his capital, thereby doubling his sales and also doubling his profits. The yearly percentage of profits depends very largely upon the number of times the capital is turned over. We often hear it said that sugar is sold at a very close margin. Let us suppose that it costs 5 cents per pound and is sold for 5 1-2 cents per pound. This is only 10 per cent. over cost, surely a close margin, but how long is the grocer's money invested? If he is close to wholesale markets, probably not over 30 days. Then in comes another barrel of sugar, on which the very small margin of 10 per cent. will be made next month. Ten per cent. per month means 120 per cent. a year. Here then is a demonstration of the fact that the smaller the investment the greater number of times it can be turned over, thereby increasing the profits several fold.

Not long ago a dealer told me that he had more capital than he needed in his business and he might as well put the lumber out on time and have what interest he could get. I asked him why he didn't start another yard, or get a larger one. I also told him that he was a money-lender instead of a lumberman; but possibly this distinction was as finely drawn as that made by an old colored Methodist minister, who was holding revival meetings. He shouted "Come up, bruddahs and sistahs, and jine de ahmy ob de Lord." "I'se done jined, said a fat lady. "Whar did yo' jine?" asked the parson. "In the Baptist Church," came the answer, and then the old man said very earnestly, "You aint in de ahmy at all, chile, you's in de navy."

Now, about collections. The proper time to collect an account is when it is due; and

*Paper Read before a special meeting of the Western Retail [illegible] held at Regina, July [illegible]

when is it due, if you did not make an agreement at the time of sale? I once had an agent who was, I thought, the best collector that ever seized a cow under a chattle mortgage. His accounts were generally quickly closed with interest-bearing notes, and the notes were paid when due. Yet, when he was sent out to collect other agents' accounts he was a dismal failure. His entire secret was that he had a definite contract with every man just when and how the proposed account was to be settled, and he made it his business to see that the promise was kept, and we can all do the same, if we do not allow the fear of losing trade to dominate. Accounts well made are half paid.

To get the best results we must work in harmony with our competitor, and be honest and fair with him. He will soon learn not to listen to tales about the cheap prices we are marking, and will be less inclined to start a lumber war, and profits are always so timid that they always disappear when the fight starts. Why grown-up, sensible business men engage in a lumber war has never been explained satisfactorily to the lunacy commission. When the fight is ended, as end it must sooner or later, the combatants find theyhave been shooting their own pocket books full of holes, and have "pinked" a few innocent bystanders. If the time ever comes when we can all work in harmony, we can eliminate the dead-beat, the man who abuses his credit, the man who lies about the price our competitor made on his bill, and the man who tears down two thousand feet of lumber in order to get a select piece at the price of common.

There is already a vast improvement. A few years ago we were sure that our competitor had horns and a cloven hoof. He felt the same way about us. But we chanced to meet away from home at a convention, and close inspection revealed the fact that our bad opinions of each other had no foundation, and that we were both pretty good fellows. This is the secret. Get acquainted. If the dealers in six or eight contiguous towns would hold informal meetings several times each year it would do a great deal to promote a friendly and honorable feeling towards one another, and if the obstreperous competitor could be induced to attend, he would soon cease to be a disturber.

But if we are unfortunately situated in the same town with a competitor who insists on making several kinds of a fool of himself, we should adhere to certain fixed business principles which cannot be violated without disastrous consequences to ourselves.

Gentlemen, the very fact that you deemed it expedient to attend this association meeting to-day is proof positive that you are progressive, wide-awake business men who have already undertaken the task of eradicating the evils to which our line of business has at times been subjected.

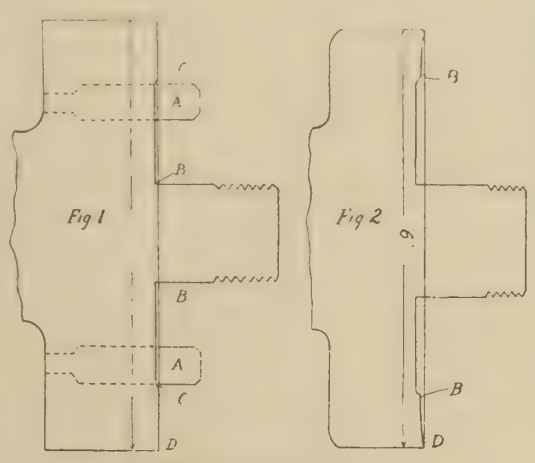
And if you will continue to support the Association, not only with dollars, but by your presence at meetings, you will succeed beyond your fondest hopes.

TROUBLE WITH SAW COLLARS.

By Old Sawmaker.

We thought we were outdone in this particular case, and came near losing a good customer. We shipped four 58 inch 80-tooth 6-gauge saws. They would not run. Joe was sent down. He re-hammered the saws and changed the lead a little, but to no avail. Saws would incline in too much, and when pulled out so as to run straight after log was squared up, they would not slab right. I was sent over, but could do nothing. I made inquiry about the mandrel. It was a new one, 4 1-2 inch steel, with 10 inch collar, and seemed to run to perfection; speed, 900.

The small saws ran very well, but the timber was large and the new saws must be made to go. After two trips I decided to test the collars. The fast collar was concaved apparently all right, but a straightedge showed only 1-4 inch. bearing on the outer edge of the collar. The result was that the saw tended toward the log. The loose collar was flat and true for 1 1-4 inches, as it should be. When the saw was tightened up it was set toward the log and inclined in. The saw had so much tension at 900 that no attention was



Trouble with Saw Collar.

paid to how it was after tightening it up. The reason the small saws ran very well was, they were only 50 inch. A small saw will run better than a large one, and any defect about the saw collar or irregularity in the saw multiplies the more on a larger saw. I faced off the collar so that there was only enough to hardly show light under the straightedge from the edge.

The foreman was wroth when I showed him the condition of the collar. He stated that he advised them to give slightly more bearing on the outer edge, but the man who did the job did not know that as much as 1-1000 inches on a saw collar was all that was necessary. Not one shop in a dozen makes a mandrel right. Fig. 1 shows how a mandrel should be turned. The pinholes ought to be in the concave, as shown at C C. D shows a straightedge on a line with the saw. A A show the lugpins. They should extend nearly through the collar, with a small hole through the collar. This allows punching the pins out in case they get tight; they should go into the collar a neat fit. B B show how the stem should be slightly rounded and not left with a square corner, which has caused many mandrels to break. There may be an objection to placing the pins as shown—that is, just inside the concave—claiming that it weakens the pins. I admit there is more of a strain, but the liability of a swell spot on the collar is overcome.

Filers cannot watch their collars too closely. We recently repaired a saw that had the appearance of being run loose on the collar. There was but 1-4 inch bearing and a slight impression was made in the saw. The owner came with the saw and said it never had run well, and that he recently had the mandrel trued up and the collars faced. Fig. 2 shows how the face of the collar was turned when it came from the shop. He informed me that a straightedge rested only on the extreme edge, as shown. No wonder his saw would not run. I directed him to send his mandrel to our shop, which he did; we faced it properly and there was no more trouble. At B B the straightedge showed 1-32 inches, tapering to the edge of the collar, as shown. This collar was much worse than the new 10 inch collar referred to; it had hardly 1-64 inches concave at B, but that was sufficient to cause trouble.

I recommend the following bearing for saws: 5 inch collar, 5-8; 6 inch, 7-8; 8 inch, 1; 9 inch, 1 1-8; 10 inch, 1 1-4. I do not recommend smaller than 6 inch collar on any mill; 7 inch is better. Cast iron loose collars are no good; steel casting collars can be made at about 25 cents additional cost. Cast iron collars spring, especially if they are thin, and this will cause trouble.

As stated, too little attention is paid to the collars. The fast collar ought to be of steel, and would not cost 50 cents more, and, when forced on against a shouder, is about as good as a forged end that costs double price. Lugpins ought to project through the saw and into the loose collar at least 1-4 inch. This is a better way. Be sure saw goes on neatly; do not force a saw on; it will strain it and cause it to run badly.—"The Woodworker."

SAW MILLS IN ENGLAND.

When attempts were made to introduce saw mills in England they were violently opposed, because it was apprehended that the sawyers would be deprived by them of their means of getting a subsistence. For this reason it was found necessary to abandon a saw mill erected by a Dutchman near London in 1663; and in the year 1700, when one Houghton laid before the nation the advantages of such a mill, he expressed his apprehension that it might excite the rage of the populace. What he dreaded was actually the case in 1767 or 1768, when an opulent timber merchant, by the desire and approbation of the Society of Arts, caused a saw mill, driven by wind, to be erected at Limehouse under the direction of James Stansfield, who had learned in Holland and Norway the art of constructing and managing machines of that kind. A mob assembled and pulled the mill to pieces; but the damage was made good by the nation, and some of the rioters were punished. A new mill was afterward erected, which was suffered to work without molestation, and which gave occasion to the erection of others. It appears, however, that this was not the only mill of the kind then in Britain, for one driven also by wind was built at Leith some years earlier.

WESTERN CANADA

Western Offices of The Canada Lumberman,
615 Hastings Street, VANCOUVER, B. C.: 720-721 Union Bank Building, WINNIPEG, MAN.

OLDEST SAW MILL IN NORTHERN BRITISH COLUMBIA.

The oldest saw mill in Northern British Columbia is located at Georgetown and owned by the Georgetown Saw Mill Company. It was built over thirty years ago, long before the inhabitants at that time had ever dreamed of the Grand Trunk Pacific, Canadian North-

SAW MILL AT GEORGETOWN, B. C.—END VIEW OF MILL, SHOWING WATER FLUME WITH LUMBER YARDS TO THE LEFT. THE BOOM IS EMPTY.

ern or any other transcontinental road that is heading towards Prince Rupert and Port Simpson. It is eight miles from Port Simpson and fourteen from Prince Rupert.

The mill is run by one of the best water powers on the coast, the source being some lakes about a mile in the rear of the property. A view of the falls is shown in one of the illustrations.

There is an ideal place in the little harbor at the mills for keeping logs, and everything is shipped by steamer or tug and scows.

The lumber cut in this portion of British Columbia is spruce, hemlock, red and yellow cedar, and a little balsam.

SAW MILL AT GEORGETOWN, B. C.—A PART OF THE LOWER YARD WITH DRY SHEDS, ETC., IN THE DISTANCE.

The mill is a circular, with re-saw, hand edger and trimmers, planer, moulder, box-making machinery, etc., the capacity being 30,000 feet daily. The lumber is distributed through the yard and to the wharf by hand cars and a rail track.

The trade is largely with Prince Rupert, Port Simpson, Maple Bay mines and the salmon canneries on the Skeena and Naas rivers. The box trade has always been a large factor in the business of this mill.

Heretofore nearly all the logs have been obtained from Indian hand loggers, the Indians in these parts being industrious and thrifty. Most of the employes are Indians and Japanese, with a few whites.

The personnel of the company is Mr. D. M. Moore, manager of the Cassiar Packing Company, president; Mr. C. W. Peck, managing director and secretary; Mr. H. Peck, the well-known millwright, foreman, and Dr. Kergin, M.P.P.

The Grand Trunk Pacific are starting construction this fall and are going to make things hum, in fact, this mill is located in the centre of a district which is certain to experience one of the greatest booms in Western history.

Northern British Columbia is the country of the immediate future. Some very good mines have been opened lately, and the country is peculiarly rich in mineral deposits. The salmon and halibut fisheries are only in their infancy. These things and the great railway development promise an era of commercial prosperity in Northern British Columbia that will make the rest of Canada sit up and look.

NORTH ARM LUMBER COMPANY'S NEW MILL.

The North Arm Lumber Company, of Eburne, B.C., have commenced the erection of their temporary saw mill. This mill will have a capacity of about 40,000 feet per day. It will be equipped with a double circular saw mill, driven by an 18 x 20 inch engine. There will also be a shingle manufacturing department containing five Johnson-Schaake shingle machines. This will be driven by a 16 x 20 inch engine. Both engines are being supplied by the Jenkins Company, of Sherbrooke, Que. The saw mill equipment and all running gear is being manufactured and supplied by the Schaake Machine Works, Limited, New Westminster. It is expected that this temporary mill will be in operation by December. Nearby the ground has already been cleared preparatory to the commencement of the erection of the company's permanent mill. This will embody, it is claimed, all the very latest ideas in saw mill construction. The main building will be 350 feet long by 54 feet wide. The

SAW MILL AT GEORGETOWN, B. C.—A CORNER OF THE WHARF AT LOWER END OF LUMBER YARDS, A CAR PARTIALLY LOADED WITH SALMON BOX SHOOKS IN THE FOREGROUND. THE WHITE CROSS ON THE TREE IS A CHANNEL MARK TO DIRECT THE COURSE OF STEAMERS ENTERING THE HARBOUR.

equipment will include a double cut band mill, gang saw mill, and edger. Its output will be about 100,000 feet per ten hours. The company will have a fully equipped planing mill in conjunction. The site of this plant occupies 12 1-2 acres on the north shore of the North Arm of the Fraser river, immediately adjoining the right of way of the Vancouver-Steveston Electric Railway line on one

THE GEORGETOWN FALLS AND THE FLUME WHICH LEADS TO A DAM ABOUT 150 YARDS BEYOND.

side and the Eburne-New Westminster Electric line on the other. A spur line will run through the piling grounds.

This gives the company direct rail connection with Vancouver or New Westminster,

and direct water connection also with New Westminster. In this way, by means of scows, they can load sailing vessels at New Westminster for their export trade.

Mr. R. H. McKee, of Vancouver, is president of the North Arm Lumber Company, Mr. H. L. Armstrong secretary-treasurer and manager, while Mr. W. A. Kennedy is superintendent of the mill.

EBURNE SHINGLE COMPANY'S NEW MILL.

The Eburne Shingle Company, Limited, of Eburne, B.C., is making good progress with the installation of their mill equipment. This company was incorporated on June 29th last, with a capital of $10,000. They have acquired the old Greenwood cannery site and building on the banks of the Fraser river at Eburne, where they are installing complete shingle manufacturing machinery, consisting of two Simplex shingle machines, of Letson & Burpee make. They have ample room for several more machines, when business warrants it. They are also erecting a dry kiln, capable of holding the output of four shingle machines at once. Power for this plant is supplied by a 45 horse-power engine. The officers of the Eburne Shingle Company are: President, F. G. Stratton, of Vancouver; general manager, J. W. McKay, Eburne, and R. G. Mackay, secretary.

HANDLING SHINGLE SAWS.

There are so many opinions concerning the tension in a shingle saw that some filers do not know which is right. Allow me to state that I never saw one do good work until it was properly hammered. Do not go wild about some person's ideas, but try them, and if you find one that gives satisfaction, adopt it.

Saws change. The gauge, size and speed change, as well as the output of the mill, so there must be changes from time to time in the art of hammering. Take, for instance, a saw of 14 gauge rim by 8 gauge centre, 42 inch, then take a 10 x 18 gauge 42 inch, then see the difference. The 14 gauge used to do about half the work that people now expect the ordinary filer to accomplish with the 18 gauge. Surely, there is not more backbone to the 18 gauge than to the 14, but to overcome it they speed the thin saw much higher, which means more care, more hammering and more tension, and this requires steadier motion and exactness of machine work.

The arbor should be turned true and well balanced. I like to have a shingle saw collar turned true from rim to centre. Some order them low at the centre, but experience teaches me to have them true and alike. I have used paper between the saw and collar, to level it, which is a help where the machine shop is not handy. Some claim that by having the collar low at the centre it helps to keep the saw from running out of the block, but a saw properly hammered will go to a straight line, if properly dressed.

I was called upon to hammer two 44 inch 17 gauge saws which had 24 inch collars. These saws were of excellent temper and steel, also well ground. They had been sent back to the factory, but would not work. I tested them; also the collars. One collar was high at the centre, so I made a ring of paper and placed it around the outer edge of the collar, which leveled it all right. Then I tested the saws. The tension was very good at a point about two-thirds the distance from centre to rim, but the centre was very fast or tight, which would not permit the saw to cut straight. It would not make even cuts, no matter what the speed might be. I hammered this saw until it showed even tension from rim to centre, or, in other words, from rim to rim. I then hammered the other one, leaving them both alike as near as possible. You could not tell one from the other by the way they run, and both went to our entire satisfaction, not even trembling at extreme run, and would do good work in maple or pine grape basket tops and bottoms from 1-2 inch thick, 16 inches long, down to 1-5 thick, through knots and curls, cutting bastard stock, which tries a thin saw, as the block may have a right-hand grain for the saw to start into and come out of a left-hand grain, which will change the course of the saw if anything will. This may satify you that the centre of a shingle saw must be opened to the balance of the saw in order to work well, no matter what the size of the collar may be. Don't dispute this without trying it.

In straining a shingle saw do not use the cross-face hammer to stretch the steel with, but use a round-face hammer and not very sharp. Be sure you have a tight rim on your saw before you try to run it. Some strain a saw a little more on the block side for horizontal machines. This is a help, but do not go too close to the rim with this treatment or your saw will run into the block, cutting a thick shingle, and will not last as long as if dished more near the centre.

Do not hammer the rim of a thin saw any more than is strictly necessary, as the more you work the steel the faster it loses its strength. Use a short straightedge when evening up on the tension, and be sure that it shows even tension from rim to centre all around.

Now comes the use of the full-swaged tooth. This is a good tooth, but requires lots of work to keep it in proper shape: but without a doubt it is the proper shaped tooth for a rip saw. But do not overlook "economy," as some timber cuts well with the spring set tooth, while some other kinds cut equally as well with full-swage; either will do the work if properly handled.

When testing your shingle saw for lumps, let the centre rest upon the anvil, then use straightedge cross-wise of a line from centre to rim, which will readily show all bad lumps. Mark each one, and as fast as you can level them erase the marks. Go around and around your saw until you are satisfied you can find no more. Use your tension gauge the same way, only letting the saw rest on each rim when you are evening up the tension on leveled side of saw, but do not try to use straight-edge cross-wise of the level on collar side. Always examine the tension in your saw after you have removed the lump, if any, as you may change the tension by taking out the little lumps.

I have hammered 18 gauge shingle saws for men to run that had not two months' experience, and they made a success of it, just because the saws were properly hammered for the motion.

I have known of a shingle saw being hammered without removing it from the flange. Never do this, as no man can tell much about it, this way. Always take the saw from the flange. Use the straightedge from centre to rim, then use it cross-wise of a line running from centre to rim. Do this over every inch of the saw. If you use a long straightedge on a saw that has lost all its tension, you may find it to stand a twist. Do not try to bend this twist out as, the rim being so loose, will cause it to stand in this twist; simply stretch the saw from centre to very close to the rim. When you have done this on both sides of the plate and filed the body of the saw, you will not be able to find that twist; but do not fill the centre too full.

When using the straightedge on the beveled side of the saw you may rim it from centre to the outer edge of flange seat, then from there cross-wise of a line running from centre to rim. Use a 12 inch straightedge for this, then to finish use as short as 6 inch. Be sure that your shingle saw shows tension clear out to the rim, leaving the extreme cutting edge the tightest; with a gradual or even tension toward the centre. For saws 40 inch diameter, 16 gauge rims, to run 1,600 per minute. The centre should sag from a straightedge that reaches clear across the plate, about 7 gauges; that is, the thickness of a 7 gauge piece of steel. If the saw is of good temper and steel, it will be about the proper thing, but if the extreme cutting edge is not the tightest, it will not do its work if the centre should sag one inch, but would flutter on the rim when under motion.

You cannot tell much about your saw when screwed down to the flange; that is, about the tension. Always take it off the flange to test the tension or strain. Some people hammer more on the block side of the saw, so as to hold it into the block a trifle, but for vertical machines I prefer it tensioned perfectly even, both sides alike; for horizontal machines they work well strained a little more on one side—ust enough to counteract the weight of the rim, as it has a tendency to lop down a trifle when under motion. Do not use a cross-face hammer to take tension out of a shingle saw; use the round-face or dog-head, with not very round or sharp face, so it will not cut the plate. Use a steel-faced anvil and have it a little oval or a little high in the centre. Do not use a flat anvil for shingle saws; it will not give the desired results. I like a 6 x 9 inch, or a round-faced anvil, say 7 inches in diameter, of about 80 pounds weight. I use the 3 1-4 pound hammer to strain or tension and with a 2 1-2 pound hammer to even and finish with, but this is at everyone's option. Use what you can handle best, is my advice. But remember that you can spoil a thin saw with a 2 1-2 pound hammer if you do not use judgment.—Packages.

THE

Canada Lumberman

AND WOOD-WORKER

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ADVERTISING RATES ON APPLICATION.

THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in every part of Canada in the lumber, wood-working and allied industries. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication in the WEEKLY LUMBERMAN the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN AND WOOD-WORKER is undoubtedly the most direct and profitable advertising medium. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

WHAT PINE MAY COST.

The high price paid by the F. McGibbon & Sons Company, Penetanguishene, for the right to cut pine timber on Franklin Island in the Georgian Bay, has furnished ground for considerable speculation as to the price to which white pine must eventually soar and also incidentally furnished food for reflection as to the probable future of the lumber industry in general. Indeed, the "Ottawa Citizen" goes the length of suggesting, in a recent editorial on the subject, that a lucrative departure for the Ontario Government would be to "cut its own pine and sell the logs to the saw mills and the pulpwood to the pulp and paper manufacturer as raw material. The harvesting of the pine crop is a natural duty of public ownership and would not interfere with any established industry . . . Under the present wasteful methods of the lumberman nearly as much timber is wasted as is cut. The whole object of the lessee is to cut as much timber off the country as possible."

Apparently the writer has taken little time for reflection in making either recommendations or denunciations. Let us consider the facts:—

Mr. McGibbon pays $12.26 to the Government for the right to cut this timber, as well as $2 for stumpage dues. The logging will cost probably $5 per thousand, towing $1 and sawing $3, making a total of $23.26. To this amount must be added a towing loss of not less than 75 cents a thousand, together with 6 per cent. interest on the money invested, which will make a grand total of somewhere about $25.39 per thousand, before Messrs. McGibbon can put the manufactured article on the market. To this must be added a profit before the lumber is in the hands of the consumer. These figures can take no cognizance of the fact that other incidentals must also arise, neither can there be reckoned in dollars and cents the mental worry attending the operation of such a valuable purchase. If the Ontario Government cares to embark in the logging business for the purpose of making money for the public at the prevailing prices at which finished pine is sold, the majority of lumbermen will bid it Godspeed, but the probability is that it will refrain from doing so—for the present at least.

Moreover, it is superfluous for the "Citizen" to remark that the object of the lessee is to cut as much timber off the country as possible. No lumberman is working timber limits for the sake of his health; but for any reputable journal to declare that the modern lumberman wastes as much timber as he cuts is a statement too puerile to deserve refutation. The Government has hedged too many restrictions about the granting of timber licenses to permit the lessee, even if he so desired, the opportunity of making dishonest capital at the public expense.

SELLING OUR BIRTH RIGHT.

More than once our attention has been drawn to the fact that desirable timber lands in Canada, when advertised for sale, are almost invariably snapped up by enterprising Americans. Nay, more, we actually have complaints registered with our advertising department by firms who have had timber lands for sale, to the effect that they have in many cases received numerous enquiries from American purchasers, when not a single return was received from lumbermen in Canada. We endeavored to discover where these American enquiries originated and were not surprised to learn that they came largely from the States of Michigan, Wisconsin and Minnesota, a territory where timber is becoming extremely scarce, and which for years has been one of the busiest of American lumbering centres. Lumbermen there realize that the time must ere long arrive when the buzz of the saw will be silent in the land, and agriculture and commerce will have displaced entirely the great tracts of forest which once were. In anticipation of this, the far-sighted lumberman is casting about for a future field of operations. To-day British Columbia is being overrun with American "speculators," as they are called; in reality shrewd, far-sighted business men, capable of anticipating the future of an industry which must grow with the advance of commerce and the adoption of correct methods of reforestation.

In the meantime what are Canadians doing? Comparatively little. True, we have not yet felt the pinch of timber poverty, but, should we continue for long to pursue this policy of allowing our American neighbors to acquire without opposition huge tracts of the finest timber land in the world, the fault is ours alone. There is continually being offered for sale in British Columbia land which Canadian capital should purchase and hold, if necessary. As it is, American financiers are meeting with practically no opposition in their western exploits, and in consequence are securing large tracts of extremely desirable land, which they are now holding, and probably intend to hold for a long time to come.

Provided the present strong demand for timber continues unabated for the balance of the year, the revenue of the British Columbia Government from the sale of licenses, collection of royalties, etc., will amount to fully $1,500,000. Licenses are now being issued at the rate of 1,000 per month. The collections and other revenue for the fiscal year, ending June 30, totalled $851,000. The demand for timber land was never greater in that province than now.

Among eastern Canadian lumbermen there is a danger of the importance of our western timber heritage being overlooked. The timber of most general production there just now is Douglas fir; perhaps next in importance comes western or yellow pine. Of this latter class of wood there are several varieties found in the mountain districts east of the Vancouver region. In that region are also found fir, red cedar, hemlock and spruce.

The timber at present considered accessible, because of topography or nearness to manufacturing centres, has been during the past few months so thoroughly covered by licenses that in most cases those who desire to secure timber have to buy the licenses from their present holders. Prices for such purchasers range from 25 cents to $1 per thousand feet (sometimes more for especially desirable tracts), in addition to which the purchaser must assume the annual rental fee of $140 a square mile in the coast district or $115 in the eastern sections. Moreover, when the timber is cut, a royalty of 50 cents a thousand on all timber suitable for saw logs, piles, spars, railroad ties, mining props or shingle bolts is collected by the Government. It is probable, however, that ere long this royalty may be increased to 75 cents or $1 per thousand. It was only a strong protest to the British Columbia Legislature that prevented the increase going into effect a few months ago, when the lumbermen succeeded in having the measure withdrawn until January next. The annual rental covers all the taxes and charges except surveying fees. It is necessary to employ surveyors before cutting is begun, the fee for this service being $25 per day.

In no part of the world perhaps has the lumbering industry grown so rapidly as has been the case in British Columbia during the past decade. Besides the continually growing demand in the Prairie Provinces, the export trade is becoming an important factor and promises speedily to bring British Columbia lumber into requisition in many foreign lands. A careful consideration of the facts must prove to Canadian investors that time must not be wasted in endeavoring to gain at least a portion of the land that must ere long furnish the world with much of its best timber. Let Canadians not neglect their opportunity of holding for themselves an industry which must eventually become of international importance.

FIGHTING FOREST FIRES

To form even an approximate estimate of the financial loss attending the great forest fires, which year after year have wrought havoc in our western timber areas, would be the most impossible of tasks. In British Columbia particularly immense areas are annually overrun by fire and denuded of the valuable timber which is such an indispensable natural asset of the Coast Province. With the perfecting of the Fire Protection System, however, this loss is gradually being curtailed, until, during the present season, we have thus far had fewer forest fires, and, consequently, smaller financial losses, than in any previous year.

In fact it has only been within the past three or four years that any organized effort has been made to guard against and combat forest fires. Prior to that time far more timber was annually destroyed by fire than was cut by loggers. The increasing value of timber holdings and the constant menace to their existence by fire, following in the wake of exploitation and settlement, demanded more stringent measures of protection and the Forest Fires' Protection Act was framed. At the last session of the British Columbia Legislature $25,000 was set aside for forest protection, which rendered possible the employment of 25 fire wardens and 75 assistants, who are constantly engaged in patrolling their several districts. All the lower part of the province, which is divided into holdings, is thus carefully patrolled, and it has been found that, while he cannot in all cases prevent serious losses by fire, the fire warden has been of great assistance in curtailing both loss of life and property.

Causes of forest fires are numerous. In some parts of the west lightning probably starts more fires than arise from any other cause. Electric storms, passing over the mountainous regions, accompanied by but very little rainfall, almost invariably leave a number of fires in their wake. Among other natural causes may be mentioned the sparks struck by boulders rolling down the steep mountain sides. Indians claim to have seen fires started by the friction of lodged trees constantly rubbing against each other in the wind. Forest regions through which railroads pass are subjected to numerous fires originating from locomotive sparks. Prospectors and settlers, in burning brush and debris or cultivation, sometimes permit the fire to escape control. Camp fires are sometimes left burning by careless campers. Cigar stubs and unextinguished matches, carelessly dropped in the woods, have resulted in destructive forest fires. In some localities Indians have been known to fire the woods in order to drive game from cover.

Forest fires vary greatly in severity according to weather conditions and the amount of inflammable material in the course of the fire. Roughly speaking, they may be divided into two classes, ground fires and top fires. Two types of the former occur. The easiest to control are those confined to the humus and grass. The other type occurs in windfalls and frequently proves very difficult to control. Top fires may also be divided into two types. In the first, the fire is carried into the tops of individual trees, through the moss and low-hanging branches coming in contact with a ground fire. In the other type the fire is driven by the wind through the tree tops as well as through the windfalls and undergrowth. Such fires are exceedingly difficult to control and the efforts of the rangers on fire patrol must be directed chiefly toward the discovery and extinguishing of forest fires before they reach this stage.

The work of fighting forest fires involves two phases—control and execution. A fire is under control as soon as the work has progressed to the extent that the fire fighters are able to prevent its further spread. Fighting a forest fire is a matter of experienced judgment coupled with skill and endurance. Inexperienced persons can be trusted to do only certain kinds of work in connection with forest fires, and in some cases they may do more harm than good.

Immediately upon arriving at a fire the ranger's judgment is put to a test. Obviously, he must do one of two things—begin work alone or ride for assistance. If telephone lines have been built he may phone for aid. If the fire is small he probably extinguishes it without difficulty. If it has gained headway, however, the character of the forest, the topography of the locality, the probable weather conditions for some days to come, the likelihood of other rangers sighting the fire, etc., are questions to be considered. Contrary to the popular belief, one experienced man can do a great deal of effective work entirely alone, even against a severe fire. For work on the larger fires, however, help is generally secured either from other rangers or through the hiring of special assistance.

Before the work of fighting a forest fire can be intelligently directed, it is necessary to note the direction in which the fire is advancing as determined by the wind and the topography of the locality. A complete circuit of the fire must be made in order to determine the points of greatest danger and to locate the places where work is most likely to be effective. The camp of the fire fighters must be located as near as possible to their work. This is frequently a difficult matter. The fire may be near the top of a steep mountain with the nearest water a thousand feet below.

The fire seldom advances in an even line. In most cases the line is very irregular with some points far in advance of the main fire. Work should always first be begun on these advanced points with the object of getting the other portions of the line under control as fast as they come abreast.

If the fire is not traveling rapidly, it is sometimes advisable to work close to the line. The fire fighters are equipped with axes, shovels, mattocks, brush hooks, saws and any other tools that may be available for use on the particular fire. Sand and dirt are thrown on the burning logs and debris along the fire line in order to smother the flames and smoke, as water is seldom available.

With the heat and smoke greatly abated by these means, it is possible to work quite close to the fire. Smouldering logs are pushed back into the burning. Fallen trees afire at one end are sawed in two. Spruce and fir trees with low-hanging limbs are stripped of their lower branches in order that the fire may not get into the tops and throw sparks about the forest. In the meanwhile a trench is dug in front of the line of fire. This trench must be dug down to the mineral soil and every root and decayed log must be cut clean. The soil and rubbish removed from the trench is thrown back into the fire for the purpose of smothering the flames and for the additional reason that there may be smouldering sparks in the rubbish which might undo all the work if thrown on the outer side of the trench. In digging the trench it is absolutely essential that no fire be smouldering in the humus on the outer side. It is impossible to tell by sight, the only safe way to detect the presence or absence of fire in the decaying vegetable matter being by feeling with the bare hand.

If a forest fire is spreading rapidly, however, the work assumes a different charcater. It is impossible to work close to the fire, for as fast as a portion of the firebreak is completed the fire sweeps around the ends and the work is lost. In such cases it is necessary to begin far enough in advance of the fire to insure sufficient time to complete the firebreak before the fire drives the fighters from their work.

The firebreak is laid out so as to take advantage of every natural check that can be brought against the fire. Parts of roads, trails, creeks, glades, knolls and ridges, thinly timbered parts of the forest, etc., are connected into a continuous firebreak. The seedlings, saplings and brush are cut and thrown toward the approaching fire.

As soon as the firebreak is completed, backfiring is begun. A row of fires is started on the inside of the firebreak, with the object of burning the inflammable material between the firebreak and the line of the advancing fire. It is one of the perversities of nature that back fires are sometimes very hard to set. The fierce heat of the forest fire parches everything in front of it for many rods, and when the fire approaches the spot trees and logs burst into flame without apparent contact. Along the firebreak away from this intense heat, however, it is often difficult to get backfires under way as rapidly as desired. The contrary direction of the wind increases the difficulty. It is usually necessary to start

several rows of fires in the space between the firebreak and the forest fire. At night is the best time for backfiring, as there is usually much less wind and it is consequently much easier to place and handle the fires. When forest fire reaches the strip burned by the backfires it necessarily dies out.

In addition to the work in front of the forest fire, close watch must be kept on the flanks and in the rear. Ordinarily it is comparatively easy to keep a fire from spreading laterally, but unless a close watch is kept it sometimes breaks from the side and sweeps around the end of the firebreak in front.

Much of the work of the fire fighting can be done best at night. This is especially true of work which has to be done close to the fire. The wind usually dies down in the evening, and in the cool dampness of the night the fire burns much less fiercely. A patrol of the firebreak for fires set on the outside by sparks from the burning should be kept up at night for the reason that the sparks and the tiny fires started by them can then be more readily detected and extinguished. Night work in the mountains, however, is very difficult owing to the roughness of the ground. Clambering about the steep slopes in the darkness or in the uncertain light of the forest fire is often a dangerous matter.

Even after a fire is under control, the danger is not past. Every smouldering stick within the burned area is capable of being fanned by the wind into a blazing brand which may throw sparks across the firebreak. Each spark is a potential forest fire and those which do not die out at once must be patiently hunted down and extinguished. As soon as the ground and ashes have cooled, the fire fighters enter the burned area and throw sand dirt over the smouldering logs and stumps. Burning trees not yet fallen are felled in order that they may not throw sparks into the neighboring forest. This work continues until no further danger appears to exist. Even after a fire appears to be entirely extinguished it sometimes bursts again into life. To guard against such a contingency, however, the rangers include the scene of the fire in their patrol for several days after the regular work of fighting and extinguishing the fire has ceased.

WANTED SOME SUBSTITUTES.

Under the above title some suggestions are offered by the "Timber Trades Journal," London, England, for the supplying of substitutes for Canadian and American woods, as follows:—

"Pines this season, as we have already pointed out, are both scarce and dear; while so far as volume of trade is concerned, they suffer under the additional disadvantage of the shippers' decision to reduce the credit to 90 days. Under these circumstances, numbers of users of pine will be looking around for some substitutes. Buyers of the higher grades, with first regulars fetching £34 c.i.f., will no doubt turn in some cases to canary colored whitewood, and so assist in sustaining the big demand which has existed for this wood for some months past—a demand which has had the effect of sending up the c.i.f. value of 1 x 18 and up prime from 3s. or 3s. 3d. per foot to 3s. 9d. or 4s. Regular users of American whitewood have in turn been forced by the rise in the value of this wood to look for something cheaper, and consequently a good demand is predicted for cottonwood, costing about 2s. 6d. for a similar specification. Other buyers, and perhaps more particularly the cabinet trade, look for consolation in hazel pine, for which 2s. 3d. for 1 x 15-16 inch would be about a fair market quotation.

"As a substitute for the Canadian product, New Zealand white pine is said to be strong in the running, and we have recently alluded in detail to its many virtues. For some purposes perhaps the best wood we should be inclined to recommend to buyers of Quebec pine who now find the price too high is Archangel whitewood; but, unfortunately for consumers, these goods, especially in 11 x 3 1sts, figures but lightly in this year's stock notes. We have heard of buyers of pine in the common grades who are seeking to test the qualities of the clean and mellow whitewood shipped from the Danube; but shippers appear indifferent to the calls of this market, having a big call nearer home in the industrial development of Italy. Even Norwegian planed shelvings have been pressed into use for deal work by cabinet makers in the scarcity of pine.

"The scarcity and dearness of American oak, and, even in a greater degree, the absolute disregard of a number of American shippers to their contractual obligations, have turned the attention of wagon builders and others to the oak shipped from such distant parts as Tasmania and Japan. Of this latter wood we hear most excellent reports, and in it the American wood, which it appears in texture and quality to closely resemble, has a most dangerous rival. A factor in favor of the Japanese wood in the samples which have come to our knowledge, is that our allies, careful in all things, have learnt the proper value of true and accurate sawing. Across the pond, on the other hand, slap-dash methods prevail in the saw mill, and in cutting out wagon sets variations of half an inch or so in thickness and so on are looked upon as matters of no consequence, so long as so many thousand feet of indifferently sawn stock are turned out per diem.

"Of course nearly all these calls for cheaper substitutes have their origin in the fact that the unprecedented development which is taking place in Canada and the United States has led to a huge demand for domestic purposes of well-known woods formerly freely available for export upon low first costs. That this movement is destined to further grow is certain, and in this connection there are those among the prophets of the trade who do not hesitate to predict that it will be but a couple of seasons before the export of pine deals from the ports of the St. Lawrence to this country will virtually cease. Whether this is so or not, one phase of the present situation to-day is the marked change in the attitude of the trade towards new woods.

"But a year or two back the enterprising individual who stood sponsor to a wood new to this country could always count on a very chilling reception. The idea that a relative scarcity of any of the principal woods of commerce would have sent up prices to the extent which at the present time prevails in several cases, would have been looked upon more or less as that of a visionary. The man who, with the view of an ultimate shortage before him, brought sample shipments of untried wood from the uttermost parts of the earth, while he was received with the politeness due to the man who endeavors—perhaps a bit previously—to anticipate one's wants, was nevertheless to be looked upon as an enthusiast of—commercially—an impossible character. Firms could be found willing enough to put to practical tests woods furnished them for the purpose gratis, but who, when pressed to put further transactions upon a more commercial basis, would reply that 'it didn't smell right,' or 'wouldn't take stain,' or give some similar technical reason for declining a purchase.

"To-day the position is changed. Values have risen to such a point that freightage, provided the wood is of the right sort, dwindles into comparative insignificance. The old time wood trader has indeed to expand his knowledge of geography, for, leaving out the extreme poles, the geography of the timber trade to-day is the geography of the greater part of the globe. To such an extent has the inherent conservatism which marks the methods of the timber trade been abrogated by the force of circumstances, that to-day the man who represents the interests of a new wood has a ready occasion of reeling off his patter as to its qualities with few chances of interruption. Samples of new wood no longer swell the waste wood heap untried and untested, but are subjected to careful and unprejudiced investigations. That this spirit of enquiry will result in the enrichment of our supplies of forest products seems certain, and the firms who are fortunate and enterprising enough to early recognize the commercial possibilities of such additions to our stocks it seems to us will reap no small measure of advantage compared with those who meanwhile stand idly by."

BOOK REVIEW.

An unusually tasty little booklet, issued by the Seaman-Kent Company of Toronto, has just come to hand, and is worthy of special commendation by reason of the excellence of the colored plates which illustrate the high grade "Beaver Brand" hardwood flooring manufactured by that firm. Photographs of the firm's mills and numerous interior and exterior views of residences, in which Beaver Brand flooring has been used, add much to the attractiveness of the publication.

BELTS AND BELT LACINGS FOR WOODWORKING MACHINERY

Thirty years ago the writer knew that a leather belt should be run with the grain side to the pulley. To-day he is of the opinion that, under average conditions, more satisfactory results will be had from running the flesh side in. Further, he is of the opinion that the difference is so slight as to be scarce worthy of a moment's thought, as compared with the many other matters which call for consideration in belt usage. Tom tells us, emphatically, that a "hinge" lacing is the only one that any sane man will use; Dick insists that his peculiar method of fastening is the only right one; while Harry consigns to perdition all who use anything but hooks. It is for us to give ear—within reason—to the claims of each, and to use that method which seems best adapted to the case in hand. So varied are the conditions under which belting and belt fastenings are used that one cannot, without undue arrogance, do more than to generalize as to what is a matter of selection, governed by the immediate conditions.

It is probably conceded by all that, under average conditions and for continued use, the best grade of leather belting is the most economical and effective. There are other reasons than parsimony, however, for the use of the various low-priced belts. Much dampness makes rubber preferable, and extreme length often makes the lighter weight of cotton a valuable feature; while many other variations of conditions and preference tend to prevent the exclusive use of leather.

Width and Length.

For woodworkers, the width of the belt is usually decided by the pulleys on the machine, which, most regrettably, are usually too narrow. Whether this is because manufacturers desire it to appear that their machines require a minimum of power or because machinists fail to appreciate the difference between the conditions in a woodworking shop and in their own, is immaterial. The fact remains that the dry and dusty atmosphere in which woodworking machines are usually operated is far from being conducive to the best results from belting; and one should not fail to use a belt as wide as his machine will take.

Beware, too, of economy in length. As a general rule it is advisable to have a belt as long as circumstances will permit, and there is little danger of error in the way of getting one too long, unless it is vertical or nearly so. The best service is given by a belt sufficiently long so that it will do its work and yet sag a trifle between the pulleys, as the elasticity thus attained mitigates the irregularities of stress and speed.

The idea that more power may be transmitted by a long belt than by a short one having the same tension, as maintained by some, is hardly more tenable than the notion that a heavy balance wheel creates power, but it is certain that it will wear longer. It is also true that the longer belt causes less strain on the bearings, as its superior elasticity lessens the jerks caused by faulty lacings or other lumps passing over the pulleys. With the most perfect machinery there are always some irregularities and we should aim to cushion these as much as possible.

In this matter, as in all others, conditions make a lot of difference. It is probable that, with water or electric power, with a belt of even thickness running over turned iron pulleys, in a place where sawdust, shavings and the like are not apt to get under it, a short belt will give nearly as good service as a long one. With an internal combustion engine, or even with steam power, under ordinary shop or mill conditions, the case is quite different.

Lacings.

All belts stretch, and, as it is not usually convenient to change the relative positions of the pulleys on which they run, it is expedient to have some simple method by which the ends may be quickly joined. The oldest method of so doing—and probably the most common to-day—is by means of lacing with a leather thong. Consequently all belt fastenings are spoken of, in a general way, as lacings.

It is highly desirable that the joint in a belt be fully as flexible as other parts; while, on the inside at least, there should be no break in the surface texture. A well made lacing of leather gives the desired flexibility and approximately even texture. It is impossible, however, to make a lacing with this material which will not cause a slight (more often it is considerable) break in the continuity of contact between the belt and the pulley.

This is a matter of more moment than at first blush appears, as it is quite possible that this slight break, besides adding much to the strain on the belt and bearings, may be the starting point of a serious slip. If you watch an engine starting a heavy train you will note that when the wheels once begin to slip, practically all tractive force is lost till the steam is shut off sufficiently for the wheels to get a new grip. So, when a belt once starts to slip it will not pull anything like its normal amount till it gets a fresh start. Now it is probable that, if our eyes were quick enough to see it, nearly every slip would be found to originate at the point where the lacing strikes the smaller pulley. On the smaller pulley, because the sharper bend makes the jar greater and breaks the contact to a proportionally greater extent than on the larger one.

The form of fastening which most perfectly preserves the continuity of the inside of the belt is doubtless the "boot leg lacing." made exactly as was the seam in the side of the leg of the "stogies" our fathers used to wear, except that the projecting part of the seam is outside. This projecting seam is an unsightly thing, somewhat dangerous to the unwary, and cannot be used when the outside of the belt runs close to any part of the machine or building. For rubber and cotton belts it is by far the strongest joint known, as well as the cheapest, for the lacing not coming in contact with the pulley, there is no wear on it, and any stout cord answers as well as lace-leather for the purpose. Even as people will buy poisonous food of correct color in preference to healthful food off color, the looks of this joint count very much against it; and this, coupled with the real danger from the ugly protuberance on the outside, effectually bars it from common use.

Metallic Fasteners.

There are many forms of metallic belt fasteners which, if properly used, give excellent results. The most strenuous objection to them probably arises from the fact that one accustomed to using lace-leather is apt to use a larger size than he should, thus needlessly impairing the flexibility of the belt. With sizes adapted to the work and with holes so punched that the strain thereon will be equal, most of these will be found exceedingly satisfactory and cheap. It is true that a loose end is apt to "raise hob" with wood pulleys; but one should always use care in the matter of loose ends.

The writer has found wire lacings very satisfactory on leather belts, and a form of hook so pointed that it may be driven without the need of punching holes, has been found very expeditious and durable. The superior strength of metal makes it possible to use fasteners of such small size as to make a very flexible and strong joint, but with it, as with any other material, the efficiency depends largely on the skill and judgment of the person doing the job.

Of course an endless belt that would not stretch would be ideal, but while we can make belts practically endless we cannot avoid the stretch. The man who has the time and ability to make cemented splices in his belts, whenever they need taking up, need no condolence; but most of us feel that we cannot afford the time.

Tighteners.

The use of a tightener, though it practically makes two short belts of one, would be permissible, it at all, with a belt so joined. A tightener, however, is at best added mechanism, added friction, and added trouble, while its use is very apt to be abused. Many instances might be cited where machine operators have found it more convenient to put more pressure on the belt-tightener than to find out just why more power was required, thus reducing loss of power and often serious damage. As a general rule tighteners, like sticks nailed up to keep belts in place, indicate something wrong with the machine operator.

Keeping Belts in Place.

Speaking of keeping belts in place suggests a further word in that regard. If the shafts are parallel, the pulleys in line and slightly crowned, a belt of the same length on both edges will stay on and run true without any guides, provided it is not overworked.

Occasionally we hear some novice gleefully announce his discovery that a belt does not always seek the high point on a pulley, but to these should be suggested the expediency of lining up their shafts. Two pulleys may be so shaped and placed that a belt will run centrally upon them, even though the shafts are not parallel; but it is extremely bad practice, and should never be followed except in cases of the most dire necessity.

Dressings.

The dry atmosphere of woodworking plants, as before mentioned, makes necessary in order to attain the best results from leather belts, the application of a very limited amount of some dressing of an oily nature in order to keep them soft and pliable. The dust, with which such atmosphere is inevitably laden, makes the application of any great amount—especially if it is at all sticky—very objectionable. Such sticky dressing sometimes serves a good purpose in tiding over a time of special stress; but it is likely to do more harm than good. Unless used with the utmost discretion, it soon forms, with the dust it inevitably collects and holds, a coating which seriously impairs, rather than increases, the tractive power of the belt. It is well to bear in mind that belt dressing has virtue only in so far as it soaks into and softens the belt, and that anything which tends to form a coating, or to harden the surface, is detrimental.

THE NEWS

ONTARIO.

Messrs. Pedwell & Lemcke had their mill destroyed by fire recently, entailing a loss of from $15,000 to $20,000, partially covered by $10,000 insurance.

The saw, shingle and planing mill of Mayor Lyle, Smith's Falls, was destroyed by fire recently, the loss being $6,000, insurance $2,000.

The Don Valley Paper Mills have been sold to Mr. Ballantyne, of the firm of Ritchie, Ludwig & Ballantyne, for $20,000. The real purchaser is said to be Mr. Robert Davies, of the Don Brick Works.

On September 20th the planing mill of Mr. W. M. Drader, Chatham, was destroyed by fire, at a loss of from $7,000 to $10,000, covered by an insurance of $20,000 to $30,000. Two days later Mr. Drader suffered a second loss by fire of his plant on the river front below the wagon works. The loss is placed at $12,000.

E. C. Atkins & Company, of Indianapolis, Ind., have decided to open a branch of their saw manufacturing business in Canada and have bought the Hoepfner Refining Company's old building in Hamilton, Ont. This will be rebuilt and a plant valued at $150,000 will be installed. In the saw making business the concern will employ 150 hands. There is a wide field in Canada for such a factory.

Mr. H. Finger, who has become largely interested in lumber in Saskatchewan, has sold to Walter Alexander, of Warsaw, Wis., all his interests in the Pigeon River Lumber Company, Arrow River and tributaries Slide & Boom Company, Pigeon River Improvement Slide & Boom Company, Lake Superior Tug Company and the Gunflint & Lake Superior Railway Company.

Mr. E. G. Long, of Malone & Malone, has moved before Mr. Justice Clute for an order directing the receivers of the Imperial Paper Mills at Sturgeon Falls to realize on their assets and repay the loan of $40,000 advanced by Mr. J. J. Palmer nearly a year ago. Mr. Long stated that the advance was made by his client under an agreement ratified by the court, and that repayment should have been made on June 1st last. When that date arrived the receivers and representatives of the bondholders secured an enlargement, on the ground that negotiations towards reconstruction were in progress, and that when these were completed funds would be available to discharge the liability. Mr. Masten, for the bondholders, said that the assets were worth $1,500,000, and the money borrowed from Mr. Palmer at 9 per cent. was to provide the necessary capital to keep the mills in operation. They were at the time engaged in negotiations which subsequently fell through, but had been engaged in pourparlers with other parties, which had not eventuated in anything definite, owing to the tightness of the money market. They had applied to various financial institutions, the Sovereign Bank, and insurance companies, among others, but money was so tight that, notwithstanding the valuable security offered, actually estimated at one and a half million dollars, and the high rate of interest, they had not been able to raise the $40,000 required to clear off Mr. Palmer's claim. It was vital to them to keep the mills going, as they might lose their concessions, and an order like that asked would be very detrimental. Mr. Long said that his client appreciated the situation, but he wanted the money.

WESTERN CANADA.

Another "Simplex" shingle machine has been installed lately at the Cascade mill, Vancouver,

The Joseph Chew Shingle Company, of Vancouver, last month added another "Simplex" shingle machine to their equipment.

The saw mill of Messrs. Mohr & Company was completely destroyed by fire last month, causing a loss of $3,000, of which $1,000 was covered by insurance.

Eastern capitalists have purchased the Delta saw mill at Ladner, and the plant, which has not been operated for over ten years, will resume operations at once.

W. C. Edwards & Company, Ottawa, have ordered a duplex outside packed plunger pump with pot valves from the Smart-Turner Machine Company, Hamilton.

It is reported that Mr. George Brown, of San Francisco is about to erect a saw mill at Prince Rupert. Mr. Brown expects to cater to contractors in the northern towns.

The management of the Genoa Bay Lumber Mill has recently been changed, and the plant, which has been standing idle for ten years, is being extensively overhauled and repaired.

The Port Haney Lumber Company, Limited, of Port Haney, B.C., are installing three new, latest design, "Simplex" shingle machines, to replace those destroyed in their recent fire.

Mr. McWhinney, the shingle manufacturer of Eburne, B.C., whose dry kiln was destroyed by fire recently, has cleared away the debris, preparatory to the erection of a new building.

A 100 horse-power boiler and an 80 horse-power engine have been purchased from the A. R. Williams Machinery Company for the mill at Langley Prairie, B.C., owned by Murray & McAdams.

The North American Timber Company, of Minneapolis, have purchased a site on the west coast of Vancouver Island for the immediate erection of a mill with a daily capacity of 100,000 feet.

Messrs. Geo. A. Walkem & Company, of Vancouver, recently received an order from the Terminal Lumber & Shingle Company, that city, for a new 72 in. by 16 ft. Leonard horizontal tube boiler.

The Vancouver Lumber Company, Limited, have placed on order with Geo. H. Walkem & Company for two 72 in. x 16 ft. Leonard horizontal tube boilers. The contracts call for the erection of the boilers.

Messrs. Wood & Spicer, Limited, shingle manufacturers, Vancouver, B.C., expect to erect new dry kilns of about 2,500,000 shingles capacity in the near future, as the site of their old ones is to be taken up by the C. P. R.

The Campbell River Lumber Company, Limited, of Hazelmere, B.C., have lately installed two new shingle machines at their plant. These are the "Simplex" shingle machine, made by Letson & Burpee Manufacturing Company, Limited, Vancouver.

To meet their increased business the Shawinigan Lake Lumber Company, of Victoria, B.C., have recently installed a new circular saw and edger; these machines being driven by a 30 h.p. 900 revolutions per minute Allis-Chalmers-Bullock induction motor.

The A. R. Williams Machinery Company, Limited, of Vancouver, are supplying machinery for a new shingle mill plant that is being erected by Messrs. Douglas & Thomas at a point between Eburne and Vancouver on the Steveston Electric Line. This mill will be driven by electric power.

The Heaps Timber Company, Limited, of Vancouver, have just received their new 45 ton Heisler geared logging locomotive. This was obtained through Geo. A. Walkem & Company, the local agents. Messrs. Walkem have also received an order from the McLaughlan Lumber Company for a 19 ton Heisler engine.

The Columbia River Lumber Company, of Golden, B.C., are duplicating their present power plant. The new outfit consists of a 75 kw. 3 phase 60 cycle 2,300 volt generator, 4 kw. exciter and two panel white Italian marble switchboard, all of Allis-Chalmers-Bullock manufacture; also a 14 inch x 14 inch Robb-Armstrong horizontal engine.

The Jordan River Logging Company are importing from Seattle two large Climax logging locomotives for their logging railroads on the west coast. The firm expect to get out 100,000 feet of fir and cedar per day. They also contemplate erecting next season another large saw mill at Jordan River with a cut of about 150,000 feet per day.

The Vancouver Lumber Company, Limited, have ordered several new machines from the Allis-Chalmers Company, of Milwaukee, for installation at their plant during the coming winter. There will be included a Mershom re-saw, a new flooring gang and

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shotgun feed for the re-saw; also two new boilers for the power plant of their factory and some new machinery in the factory itself.

The W. W. Stuart Company, Limited, who took over the plant of the old Great Northern Lumber Company, have been operating steadily ever since. They have made a considerable number of additions and improvements to the mill. Among these was the installation of a new S. A. Woods matcher, another planer, taking up to 24 inches, a new top and bottom circular saw and a new log haul.

Mr. U. Carson, sales manager for the Madison-Williams Manufacturing Company, of Lindsay, Ont., has put in five mills for the Cowan Construction Company on the Prince Albert section of the C. N. R. These mills will have a combined capacity of 140,000 feet, and will be engaged in getting out ties for C. N. R. construction work. Spruce and poplar are being extensively cut for this purpose.

Messrs. D. Hall and Alex. Robertson have formed a partnership in the lumber business, having purchased timber on James Bailey's property at Sardis which they will operate, together with 240 acres owned by Mr. Hall on the Chilliwack river. Machinery for the shingle mill with a capacity of 60,000 shingles per day will shortly be erected. The new firm also contemplate the equipment of an up-to-date box factory for the supply of the local fruit trade.

The mill is operated entirely by electricity, a 75 horse-power Canadian General Electric Company's motor being used for the circular saws and most of the other machinery, while a 15 horse-power motor operates the sticker and the cut-off saws. The daily output of the mill is now about 18,000 feet. The company has also contracted to take the entire output of another saw mill, located up the coast. The officers of the company are:—W. W. Stuart, president; S. A. Stuart, vice-president and mill superintendent, and F. Webb, secretary-treasurer.

The False Creek Lumber Company, Limited, Vancouver, B.C., are now in full running order. They have been operating for some time past with their circular saws, but, during September, the installation of the re-saw machine and the erection of the dry kiln have been completed. The power plant, running gear, carriage and circular saw equipment for this mill were supplied by Ross & Howard, of Vancouver, while the A. R. Williams Company supplied the steam feed, the re-saw and planer, which are of McGregor-Gourlay make. This plant is under the management of Mr. C. H. Carnwhat.

The following Washington Iron Works machinery has been ordered for British Columbia logging operations, through Geo. A. Walkem & Company, the Vancouver representatives:—One 9 x 10 inch yarding engine for King & Murphy, North Vancouver; one 9 x 10 inch yarder for the Brunette Saw Mills Company, Limited, Sapperton, B.C.; one 9 x 10 inch roading engine for Nels Morin, logger; one 11 x 14 inch roader and one 10 x 12 inch yarder for Danaher & Hulburt, loggers; one compound geared yarder for the C. P. R. Company for clearing Shaughnessy Heights, preparatory for sub-division into Vancouver city lots.

The new Imperial Shingle Company's mill on the south shore of False Creek, Vancouver, is about ready for operation. This plant will have a daily cutting capacity of about 100,000 shingles. Three of the very latest design Johnson-Schaake machines will be used. The dry kiln, which was supplied by Boyd, Burns & Company, will have a capacity of 1,000,000 shingles. The same firm supplied the shafting and much of the running gear, while the pulleys, etc., were supplied by the Western Oil & Supply Company. The boiler is one of E. Leonard & Son's make, and the engine is from the A. R. Williams Machinery Company. Mr. F. Giberson is manager of the mill.

TRADE NOTES.

The Sable Logging Company, Limited, is the name of a new company recently incorporated with a capitalization of $75,000, the head office to be at Massey, Algoma.

A new lumber firm, to be known as the Hawken Lumber Company, Limited, has recently been incorporated with a capitalization of $50,000. The new firm will be located at the village of Falding, Parry Sound District.

A mercantile concern, to be known as the Unions' Lumber Company, Limited, has applied for incorporation at Edmonton, Alta. The promoters of the company are union men of Edmonton and Strathcona, the capital stock having been placed at $250,000. The object of the company is said to be the supplying of lumber to union men at a small advance on cost.

FOR THE SAKE OF THE LIVER.

"To be taken monthly for the sake of the liver" is the prescription printed on the front cover of the Standard Dry Kiln Company's small and unique publication, the "Book of Smiles." The latest issue of this miniature magazine is a decidedly entertaining number, warranted to make anyone forget his troubles for awhile. As usual, the contents include some very clever and timely verse, together with a liberal sprinkling of good stories and miscellaneous wit and wisdom. Here and there a serious page reminds the reader of the exceptional merits of the Standard dry kiln. One of these bits of argument reads as follows:

"The more lumber you dry, the more you need the most satisfactory and economical dry kiln you can find. That's the Standard. The new Standard heating system is just about ten years in advance of anything else of its kind on the market. If this sounds like a pretty strong statement, ask us to prove it to you. The Standard graduated steel post foundation and our patent door carrier also are excellent things for you to know about, if you aim to keep up-to-date on matters pertaining to your business. Write for the catalogue and read up. The Standard Dry Kiln Company, Indianapolis, Ind."

It is stated that any dry kiln user may have his name placed on the regular mailing list of the "Book of Smiles" by simply dropping a postal card request to The Standard Dry Kiln Company, Indianapolis, Ind.

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INTERESTING SAW MILL STATISTICS.

A compilation of the reports received from over 10,000 saw mills in the United States upon their operations in 1905 gives an interesting table, in which are shown the proportion of lumber kiln dried and the proportion surfaced, the amount of slab wood sold, and the proportion of logs cut on lands belonging to the saw mill operators, says a recently issued bulletin from the Forest Service at Washington. No figures along these lines are available for New York, and none are given for several of the States in which the cut was very small.

The States in which the largest proportion of lumber is kiln dried by manufacturers are South Carolina, with 51.3 per cent.; North Carolina, with 36.5 per cent.; Florida, with 35.9 per cent.; Alabama, with 34.8 per cent.; and Georgia, with 30.6 per cent. In other States the amount is less than 30 per cent. Altogether 1,642 mills reported the use of dry kilns.

A large amount of the pine cut in the south is kiln dried in order to reduce its shipping weight, and this is especially true of loblolly or North Carolina pine. Kiln drying is practiced to a less extent in the Rocky Mountain and Pacific coast States, and very little lumber is kiln dried by the saw mill operators in the hardwood regions where the cut is principally by portable mills. For the country as a whole, about 15 per cent. of the lumber cut is kiln dried at the mill.

A much larger proportion of the cut is surfaced at the mills than is kiln dried. Of the mills reporting, more than 3,900 surfaced a portion of their cut. For the country as a whole, at least 35 per cent. is surfaced before it is shipped. In this respect Iowa leads, with 77.2 per cent. surfaced; but this is because most of the lumber cut in that State is in a few big mills along the Mississippi which operate exclusively on northern pine. Aside from Iowa, the States in which the larger proportion of the cut is surfaced at the saw mill are Texas, with 71.7 per cent.; Louisiana, with 60.3 per cent.; Idaho, 59.4 per cent.; Montana, 55.2 per cent.; and Arkansas, with 60.6 per cent. In all the other States less than half the cut is surfaced by the saw mill operators, and as in kiln drying, a relatively small proportion of the total cut is surfaced in the hardwood regions.

Some 4,000 mills reported sales of slab wood totalling 3,503,287 cords. Washington leads in this respect, with 559,231 cords, followed by Michigan, with 523,518 cords; Wisconsin, with 368,478 cords; and Virginia, with 213,522 cords. It is probably safe to assume that this slab and waste wood brought on an average $1 a cord; hence its sale was a considerable source of revenue to many mills.

The percentage of sawed logs which were cut from holdings of saw mill operators is shown in the last column. Considering only the important lumber-producing States, it is interesting to note that the proportions of output reported as sawed from logs cut on the lands owned by the saw mill operators range from 97.4 per cent. in California to 34.5 per cent. in Washington. The lumber companies in California do their own logging largely on their own holdings, and get but a relatively small quantity of logs from other sources. In Washington most of the logging is done by firms which buy stumpage and deliver logs to the saw mills for a fixed contract price, so that in this case the operator of a mill may own little or no timber land.

METHOD OF GETTING OUT ASH SHOVEL HANDLES.

Cutting wood for shovel handles is an important industry in the Maine woods, and one which pays well, so far as money recompense is considered. The lives which these wood cutters lead, however, are necessarily monotonous, and have plenty of hardship and deprivation attached to the long routine of the season.

The camps of these woodmen are pitched wherever ash saplings grow in profusion, and so, almost invariably, where other forest workers are not to be found.

From four to eight men working under a contractor live in each camp, sleeping in tents and having their cooking done by one of the party.

The contractor receives 60 cents a dozen for his shovel handles on board the cars. Usually he pays 12 cents a dozen to the land owners for the right to cut them and 10 cents to teamsters for freighting them to the shipping points, leaving 38 cents a dozen for himself, out of which he must pay his men and provide them with board and lodging.

An expert handler can manage to shape up 12 dozen lengths a day, but men of his ability are few and far between. The average workers can get from eight to ten dozen of the lengths in readiness for the market, 10 dozen a day to a man being regarded as a high average. The contractor usually goes ahead of the workmen and cuts down the trees. Then the followers strip, square and cut the trees into the desired lengths, leaving the shaping until a number of pieces are ready. The handles are not smoothed down or precisely trimmed; they simply take on a general idea of the shape, are cut to the right length and rounded with a sort of block at the end where the steel scoop is to be fastened. The careful finishing is done at the factories where the shovels are completed. Each man will average from $3 to $3.75 a day for the contractor after the latter has cut the material and the pay averages about $2 a day to a man besides his board. The season lasts until the snow gets too deep for shaping the sticks on the ground, and a willing worker, having practically no expenses to meet, generally goes back to civilization with from $200 to $300 in his pockets.—"Barrel and Box."

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PUBLICATIONS.

Mussens, Limited, Montreal, have just issued their catalogue No. 15 of railway, mining, municipal and contractors' supplies. The volume, which consists of 640 pages, is admirably bound, indexed and illustrated, and is a model for speedy reference.

The "Ideal" engine catalogue, which has recently been issued by the Goldie & McCulloch Company, of Galt, Ont., is a very interesting and artistic production. It is divided into two parts, the first being devoted to Ideal high speed engines of the centre crank type, and the second to side crank Ideal engines for direct connection. Separate descriptions and illustrations are given of the frame, cylinder, valves, stuffing box, piston, connecting rod, crosshead, throttle, governor, etc., to thoroughly acquaint the reader with each part. The Goldie & McCulloch Company will forward a copy of this catalogue to anyone interested.

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The following persons passed the examinations held recently by the Ontario Government to qualify as log cullers:—

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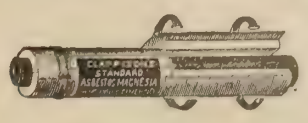

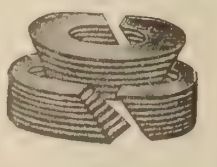

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Its low price combined with the fact that it requires no paint makes Amatite the *most economical ready roofing on the market.* Other roofings require constant attention and care. Failure to paint regularly means a leaky roof. If you count the cost of this periodical painting and add it to the first cost of these roofings, the total makes Amatite seem cheap indeed.

The first cost of Amatite is the only cost. The first cost of the "paint-me-quick-or-I'll-leak" roofings is only the beginning.

There is nothing flimsy about Amatite. It is made to last. There is twice as much material in it as there is in most roofings—the weight of a roll tells that. It is easy to lay, requiring no skilled labor or special tools. Investigate the facts. They are in our new, free booklet. We send it free with sample of Amatite. Write at once.

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THEY ARE MADE OF THE . . . HIGHEST CLASS OF MATERIAL OBTAINABLE, AND SPECIAL . . CONSTRUCTIONS ARE SUPPLIED

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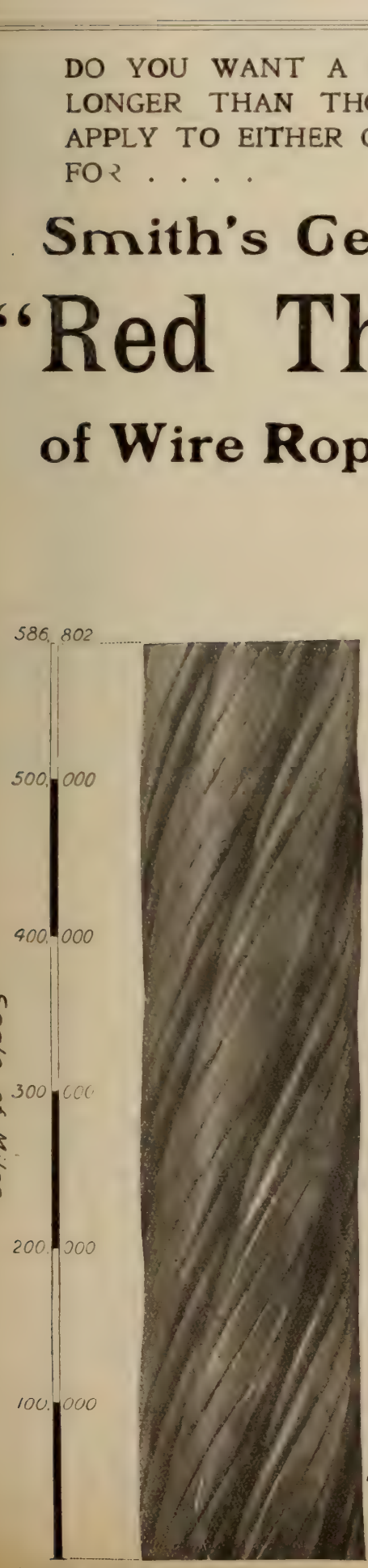

The height of this rope represents the total mileage of 12 cables supplied by various makers to the Glasgow District Subway Company.

The two illustrations shewn are photographs of our record cable on the Glasgow District Subway; these traction cables are 36,300 feet long, 4⅝ inches circumference, and weigh 56 tons each, and are the largest wire ropes used anywhere in the world in a single length.

12 of Smith's Cables have given a total mileage of.....	**992,630.**
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STOP THE FEAST.

Not a single Devil
Is now alive
On the stacks with
Graphite painted.

On the other stacks
They feast and thrive
And the stacks with Rust
Are tainted.

Stop that ceaseless feast
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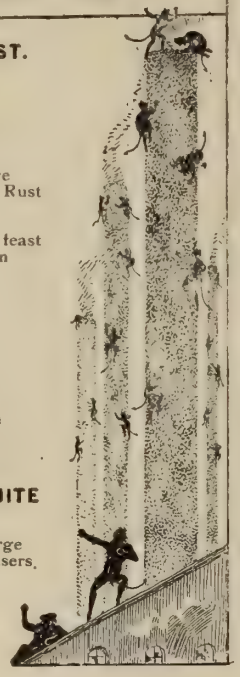

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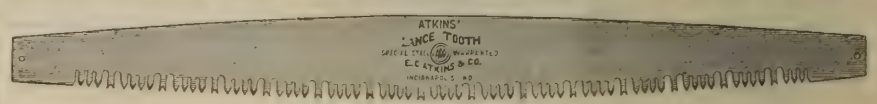

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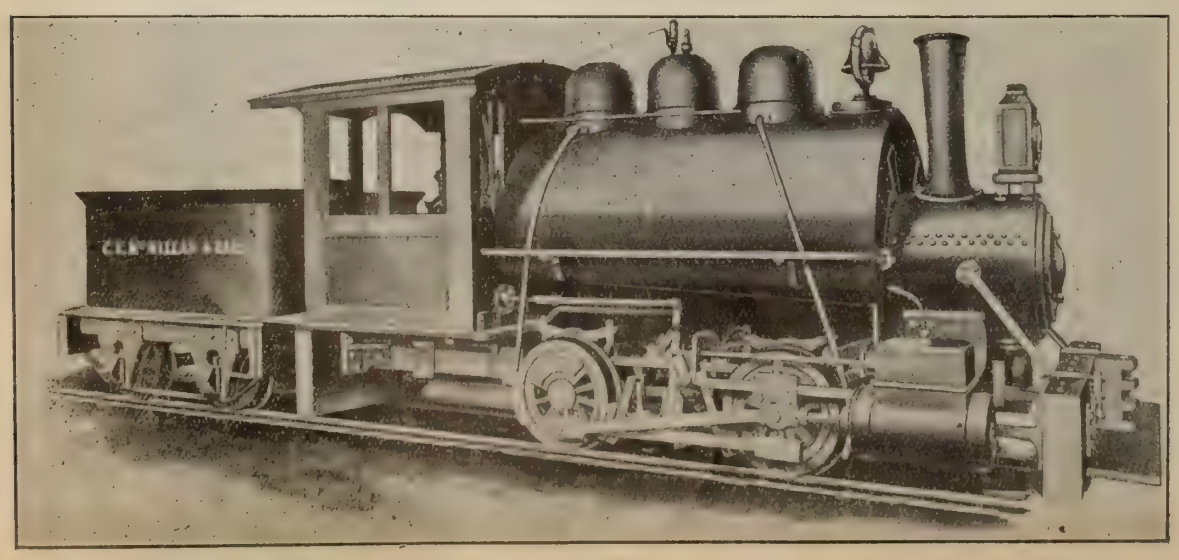

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The Ideal

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MANY TYPES ANY GAUGE
ALL SIZES PROMPT SHIPMENT

The **DAVENPORT** is designed for service under all practical conditions, and will do the work of a geared engine on any grade up to 6 per cent.

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Our expert photographer covered 20 states selecting just such views as would best illustrate what our several machines can do, are doing, and how they do it.

It shows scores of operations in the north, south, east and west, in heavy and light timber, dry and swampy ground, level and mountainous country, in fact all kinds of conditions under which logs are handled.

The book is printed in natural colors. It's a work of art. The pictures tell the story and if you want an authority on CHEAPER LOGGING simply ask for it.

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C-79

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Screw Cutting Lathe, 10 ft. bed, 16" swing, very little used; in fine condition, a chance to secure good modern Lathe at a bargain.

Also large Drill and Slotter, 24" Swing, in first-class condition.

Self-oiling Peerless Engine, 75 h.p., also smaller sizes of different makes, Boilers, all sizes, tested and guaranteed.

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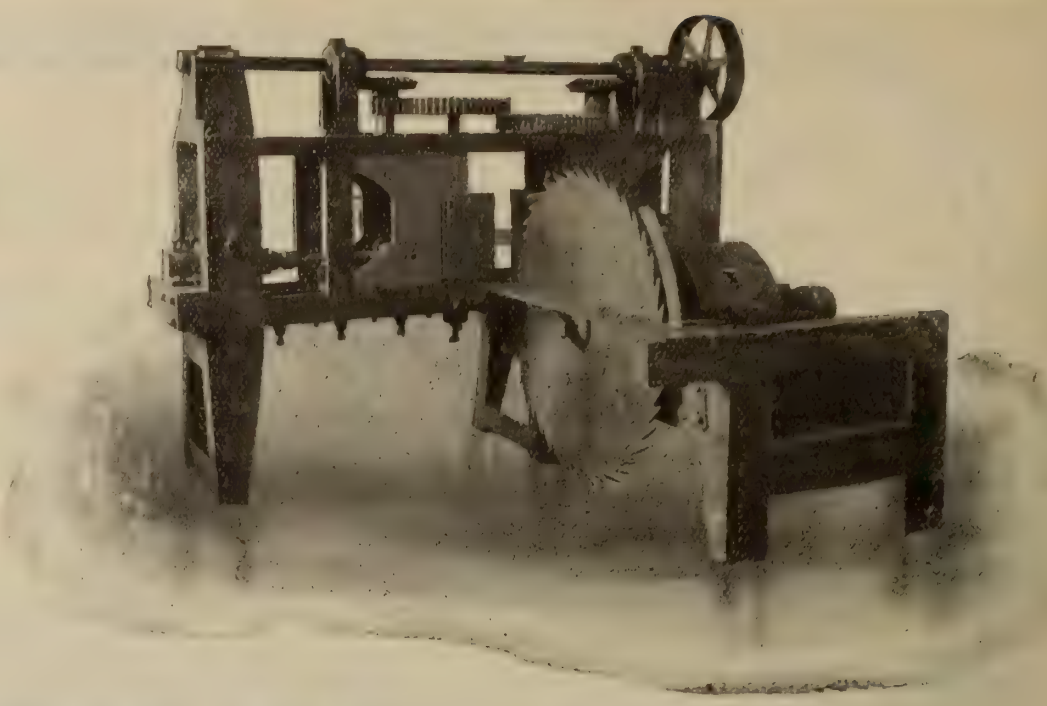
DOMINION BELTING CO. LTD.
HAMILTON CANADA

RESAWING MACHINE



As can be seen by the engraving, the frame is cast in one piece. The legs of cast iron are cast in one piece with the saw bench. This makes an extremely substantial machine.

The feed rolls 12" diameter are driven by cut gears 16" in diameter. The proportions of the gears are such as to give a powerful driving mechanism.

The arrangement to set the stationary roll (not shown in the cut) is very accurate, quick and reliable. The clear distance between the slides is 19."

The steam press is of improved construction and has a travel of 10"

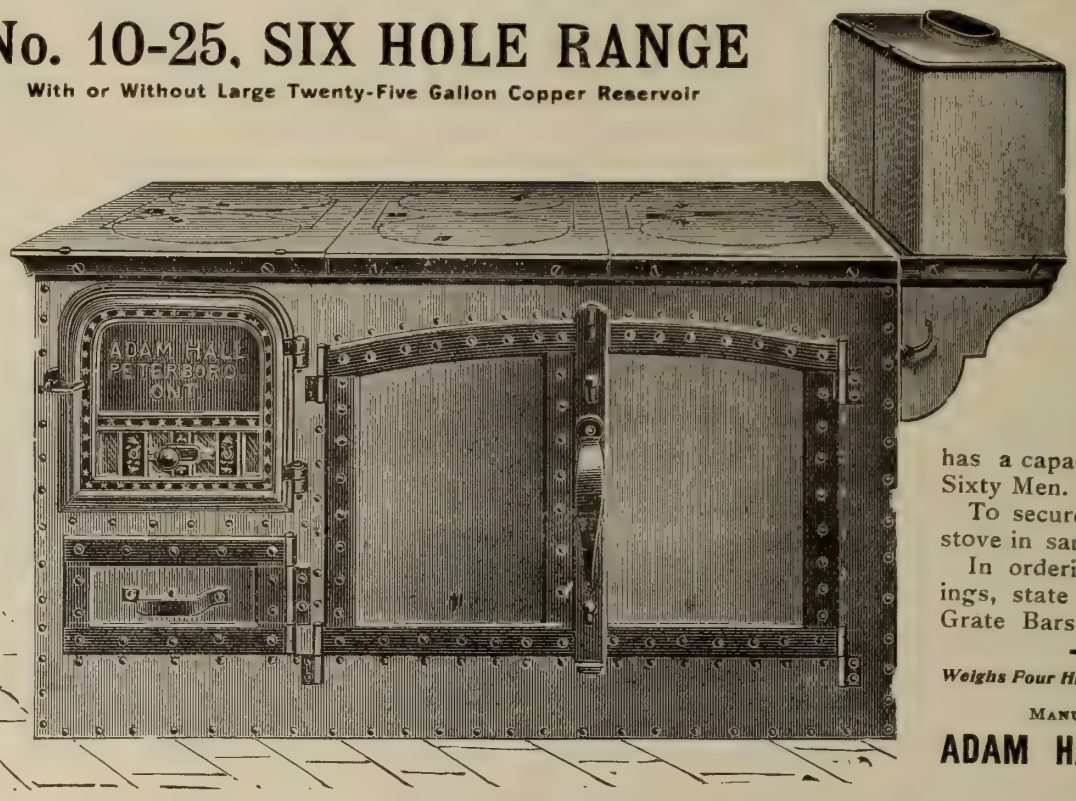
The saw is 42" and saw arbor bearing is set in slide so that saw can be brought closer to the rolls, as it wears.

The weight of the machine is 3,000 lbs.

THE SAVOIE-CUAY COMPANY - Makers of Saw Mill Machinery **PLESSISVILLE STATION, P. Q.**

No. 10-25. SIX HOLE RANGE

With or Without Large Twenty-Five Gallon Copper Reservoir



Size of Top, 54 inches by 30 inches; Size of Oven, 24 inches wide, 28 inches deep and 16 inches high; Fire Box, 28 inches, —Wood.

This Range has the large Copper Reservoir and gives the full use of the top for Boiling purposes. It has a capacity to cook for Sixty Men.

To secure best results set stove in sand box.

In ordering Fire Box Linings, state if long or short Grate Bars.

Weighs Four Hundred and Fifty pounds

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Manufacturers Canadian Lumber

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Band Sawed Hemlock, Spruce, Pine, Basswood, Birch, Oak, Butternut, Maple, Cedar and Ash Lumber, Lath and Shingles

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We own and operate the Salmon River & Northern Railway, which delivers our logs direct to mill [no logs being floated] and enables us to furnish special length timbers promptly at any time of year.

Saw Mills and Planing Mills located on C. P. R. and Ottawa River 70 miles west of Montreal

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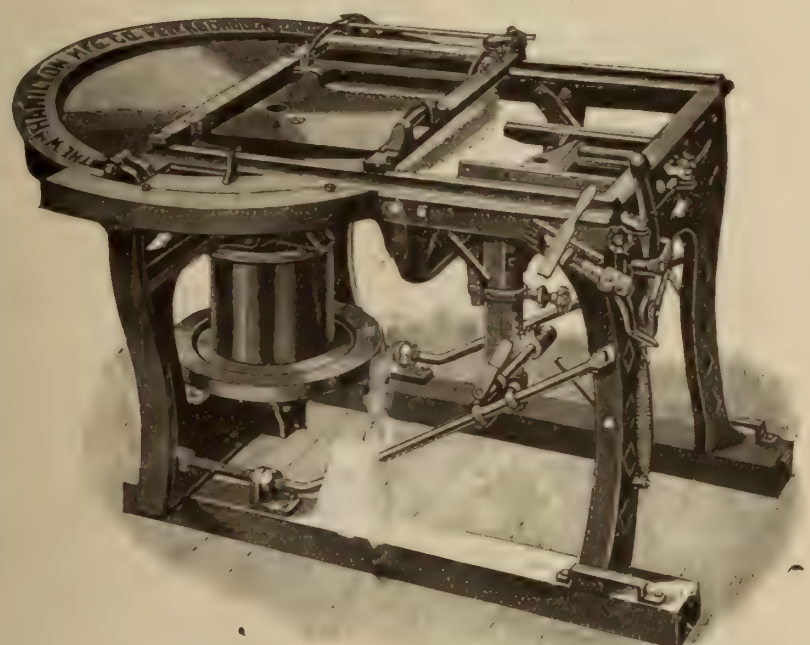


SHINGLE MACHINERY

We build everything for shingle mills. The cut shows our standard hand-feed horizontal machine.

With this machine a thick slab can be cut from the bolt and every shingle sawed riftwise A single motion of the hand lever lowers tilt table two inches or less so that a thick slab is cut off first cut and second cut is always a shingle.

It can be used either as a shingle, heading or box board machine.

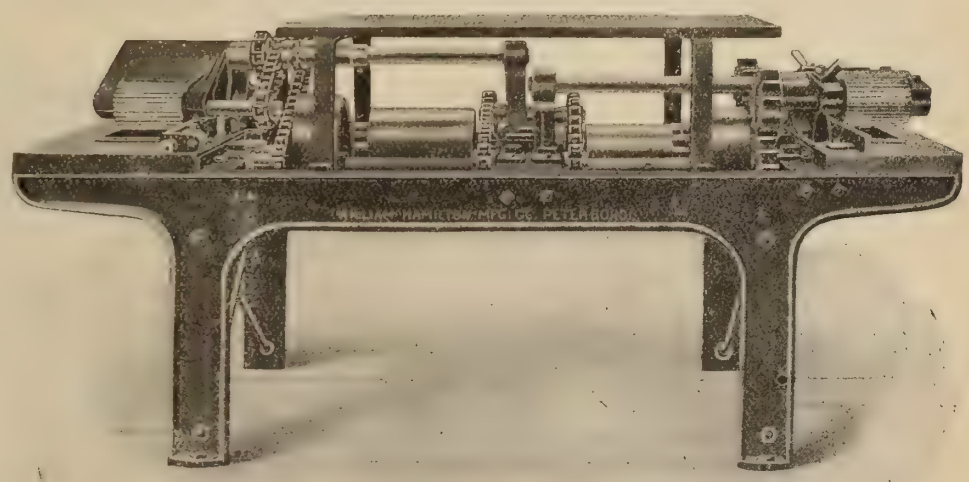
Will cut shingles 16″ or 18″ long.

This combine[illegible] mill and bolter is probably the [illegible]st handy and compact lath machine built.

It has a capacity of 60,000 lath per day when handled according to our instructions, and this is its normal day's work.

All the rolls are driven, giving it a strong and positive feed, and, with its heavy, well-braced frame, this machine will stand a great deal of hard work.

It can also be used for cutting pickets as well as lath and bolts.



Our Catalogues tell more about these machines and also give a lot of information about all kinds of machinery. You need only to ask for them.

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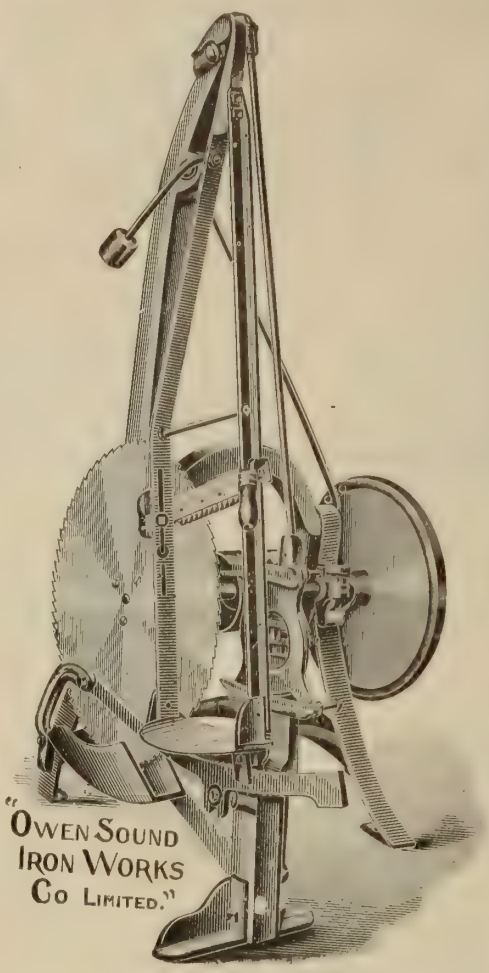
30,000 SHINGLES IN 10 HOURS

Can be Cut by Our

IMPROVED SWING SHINGLE MACHINE

This machine is also specially adapted for cutting headings, and adjustments can be quickly made. This is the cheapest priced and best machine on the market. It is also the cheapest because it will cut more and better shingles out of your refuse than any other machine.

Can you afford to burn your refuse at the present price of lumber? It means money to you. Save it.



THE OWEN SOUND IRON WORKS CO., LIMITED,

Manufacturers of all kinds of Saw Mill Machinery

OWEN SOUND, ONT.

WOOD WORKING MACHINERY

We make a complete line of High Grade Wood Working Machinery for all lumber and wood working industries.

Ask for Catalogue No. 9, which illustrates and describes all machines.

See complete list of our manufactures below.

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1 Tubular Boiler 40" x 10 ft.
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1 45 horse power engine (slide valve).
1 60 horse power engine (slide valve).
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1 Smoke Stack 18" x 40".
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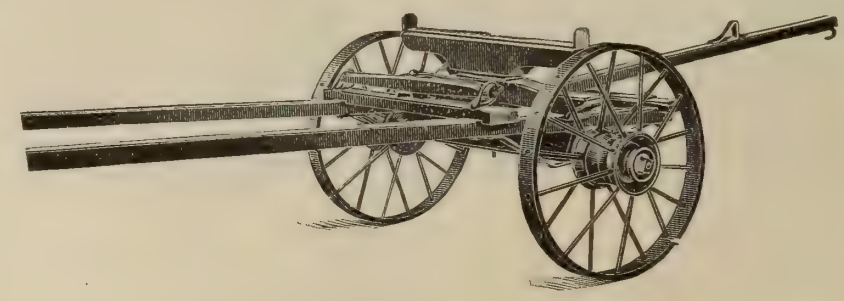
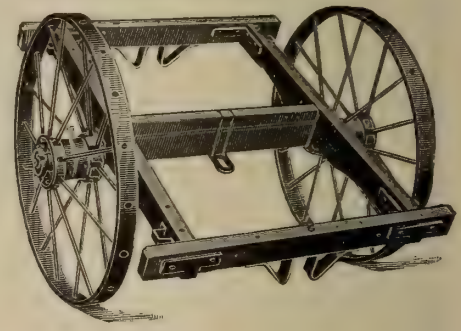
With wide tire steel wheels, for Saw Mills, Planing Mills, Lumber Yards, etc.





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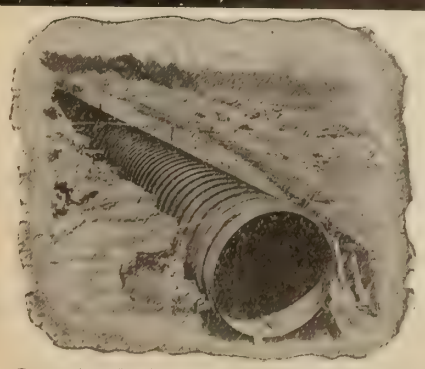

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With the combined facilities of our Sherbrooke and St. Catharines Works we are in a position to handle a large volume of this class of work and to handle it with dispatch.

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Mince Meat put up in 75 Pound Tubs. ½ Barrels about 300 Pounds.
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Sauer Kraut and Pickles in Barrels. Sausage Meat in 50 Pound Tins.
Sauce and Catsup in 5 Gallon Pails.

ALL GOODS GUARANTEED

Special Attention Given to Mail Orders

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"Hanchett"

This Name on the Swage is your Guarantee.

Simple in Construction, Easy to Adjust, Strong and Durable.

The Hanchett Adjustable Swage will swage any size or gauge of

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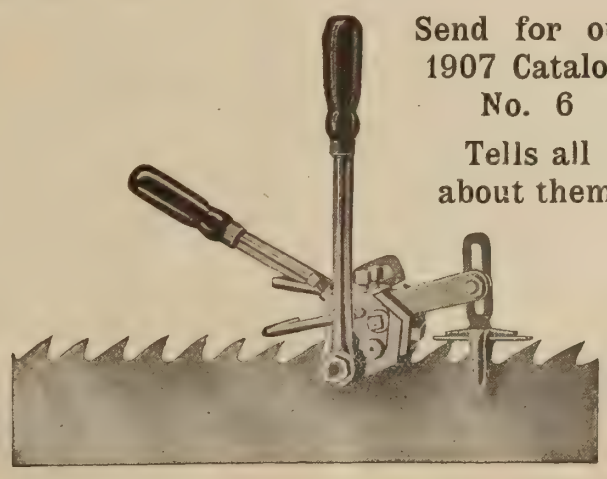
Every Swage manufactured by the Hanchett Swage Works is thoroughly tested and Positively Guaranteed to give Satisfaction.

Swage your Saws with the Hanchett Adjustable Swage; it will lengthen the life of the Saw, and enable you to make better lumber and more of it.

HANCHETT CIRCULAR SWAGE WITH BENCH ATTACHMENT AND JOINTER (STYLE D).

We also manufacture Complete Filing Room Equipment



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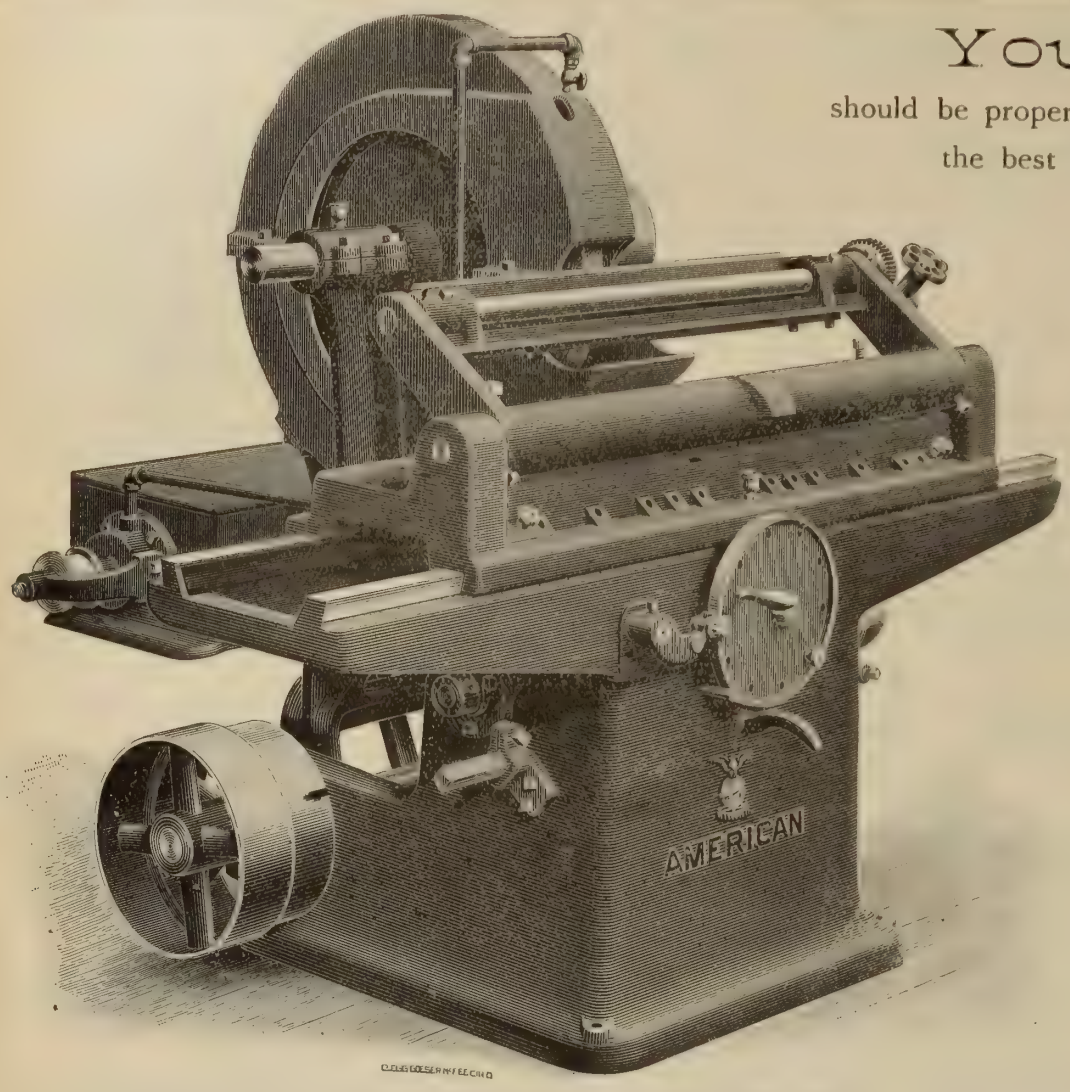

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THE "AMERICAN" No. 200 Self-Feed Knife Grinder

Does the Trick

IT'S ENTIRELY AUTOMATIC

Requires no attention after adjustment. Almost human; just set it and it will do the rest. Made four sizes 30", 36", 42" and 50" wide.

YOU NEED ONE

INVESTIGATE ITS MERITS

American Wood Working Machinery Co.

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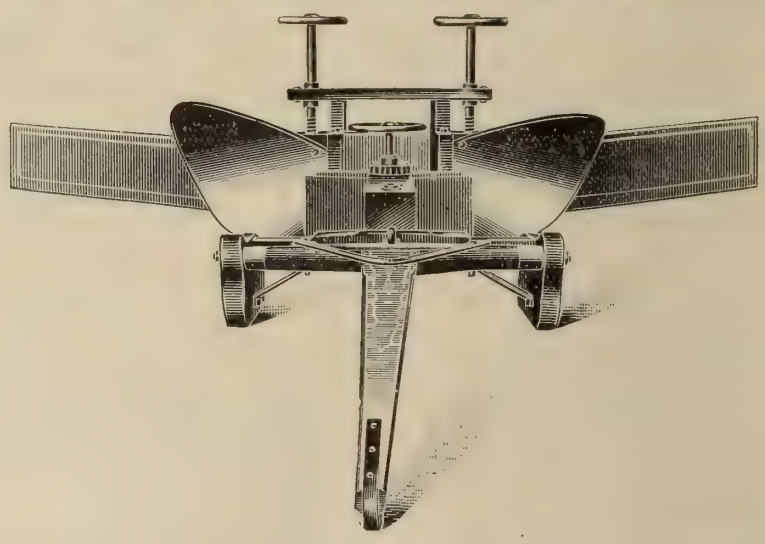
Canadian Made

Brazel Patent



One Man Operates the Plow.

Mouldboards high enough to take care of all snow.

Throws Snow 9' each side of sleigh track.

Every part well and strongly built, and of A1 material.

NOTE—All 1907 Made Plows Can Be Used With or Without Rut Cutter

IN ORDERING ALWAYS GIVE WIDTH OF TRACK, OUTSIDE TO OUTSIDE OF RUNNERS

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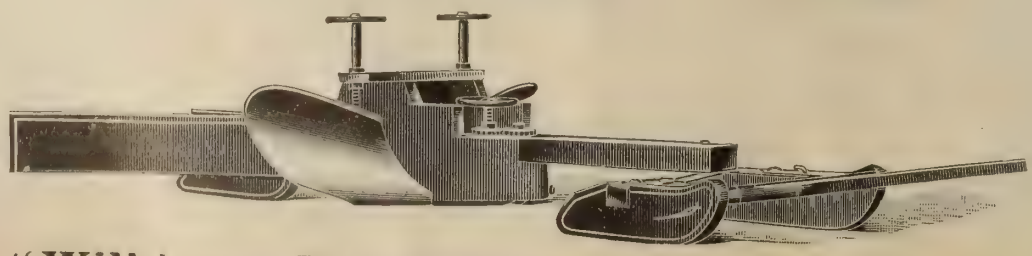

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Over 400 "Wilkinson Made" Snow Plows Now Used in Canada

The Wilkinson Plough Co., Limited, Toronto, Canada

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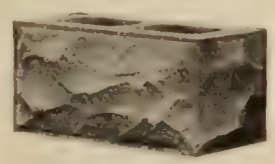
The "Down-face" principle of the Ideal Concrete Block Machine permits the only practical use of rich facing material with coarser material in back of block. This principle is protected by a basic patent. No other machine using it can be legally *made, sold or used.*

IDEAL
(INTERCHANGEABLE)
Concrete Machines
VARIOUS SIZES

Safe to buy because it is the original and only protected "Down-face" machine. Attachments and accessories will always be obtainable.

Profitable to own, because it produces blocks, not only at lowest cost, but of a quality that commands highest price. Ideal Concrete Blocks are saleable anywhere and everywhere at splendid profits.



Ideal Block showing natural stone effect. Same machine produces endless variety of designs.

Wonderfully rapid and economical to operate, because of its extreme simplicity. Not a wheel, cog, chain or spring in its construction.

Magnificent illustrated catalogue of the entire Ideal line, a practical encyclopedia of cement block manufacture, sent free on application.

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Sure Cure for Galls, Colic Cure, Excelsior Liniment, Pure Condition Powders, Hoof Ointment, Heave Relief, and Proud Flesh Powders.

GUARANTEED to prove Satisfactory or money refunded.
Send in your prices to-day or write us for prices and booklet.

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Write for particulars about small spurs, thin saws, new method grinding and hammering, and best equipment for filing room. Address Box 78, CANADA LUMBERMAN, Toronto.

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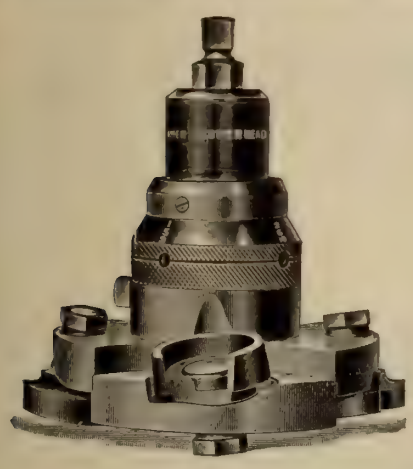

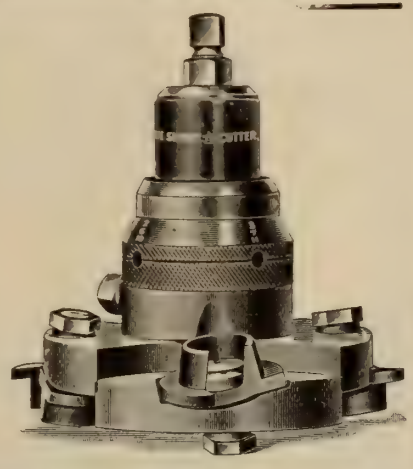

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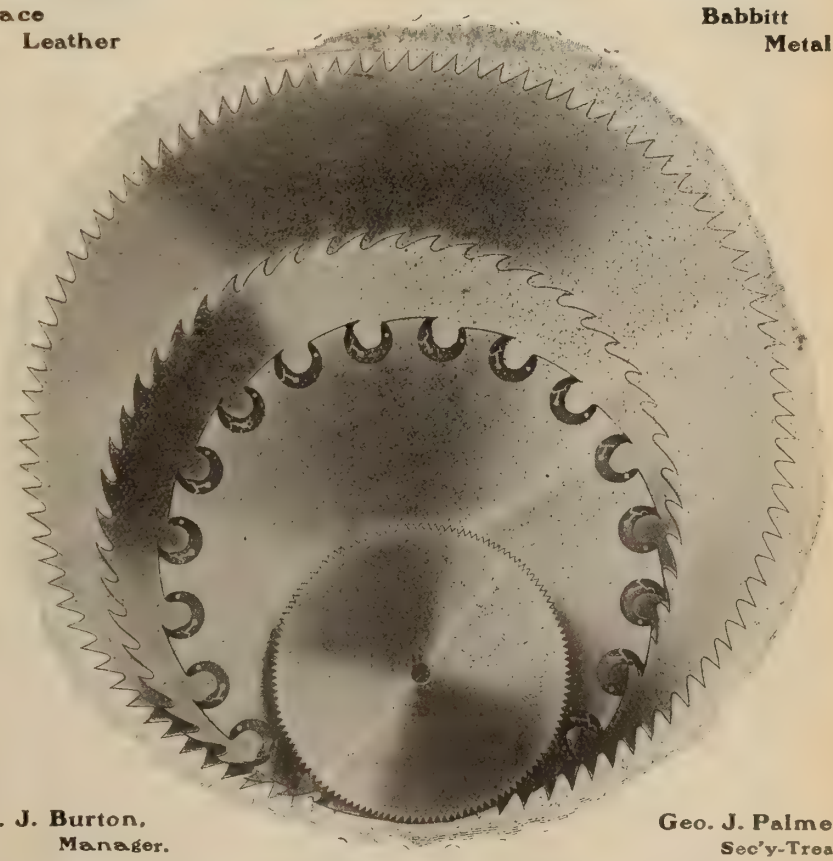

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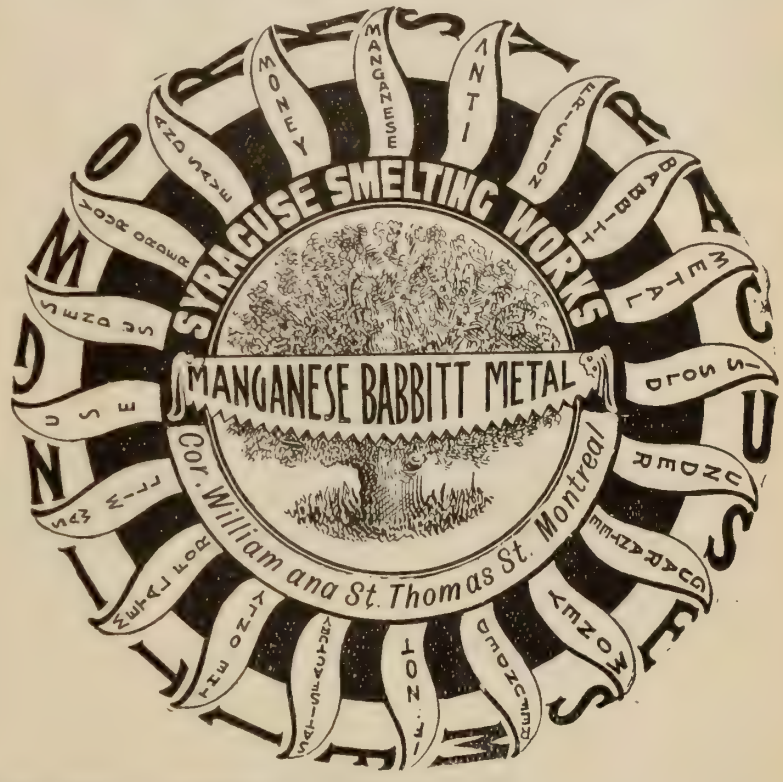

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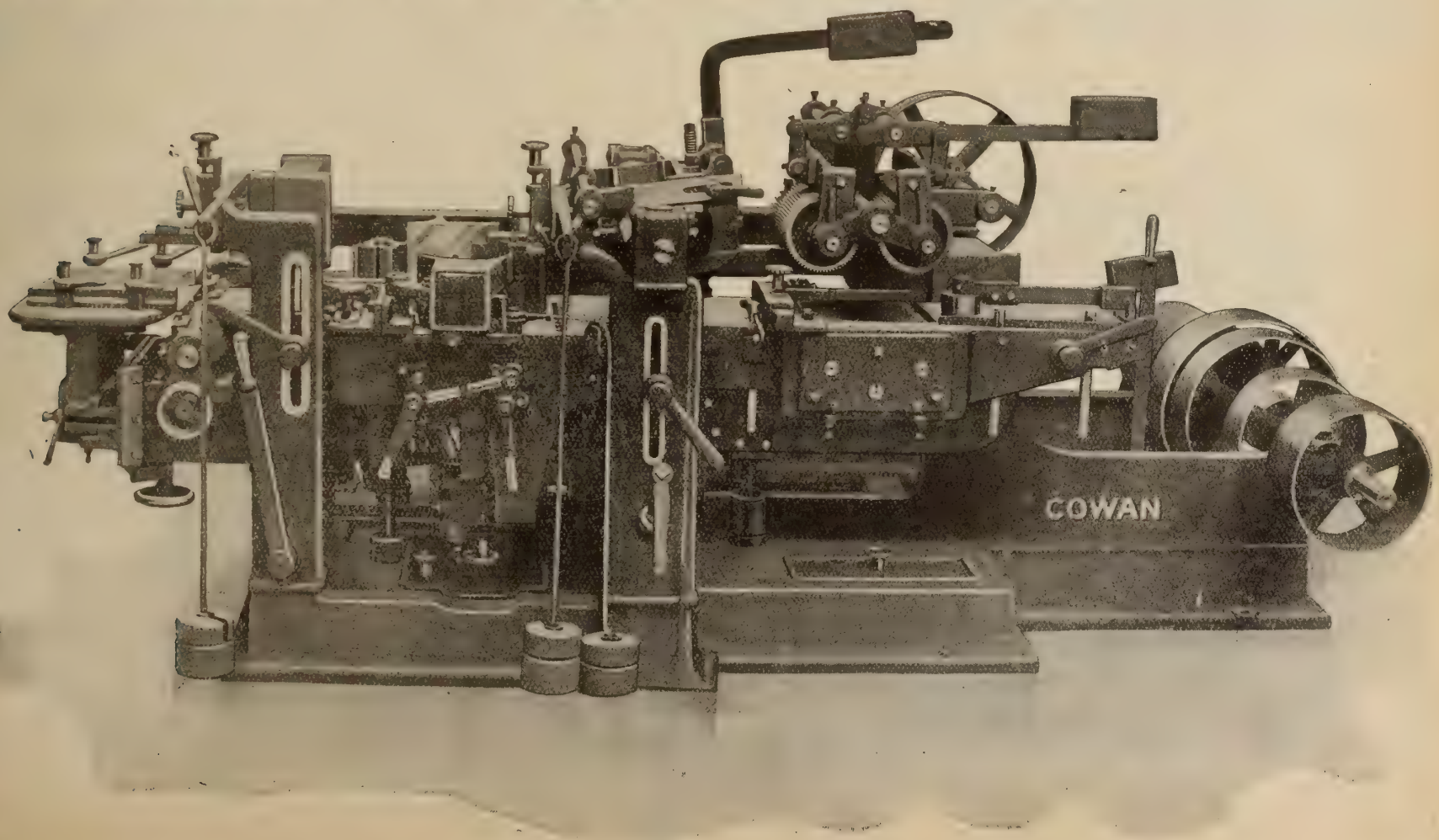

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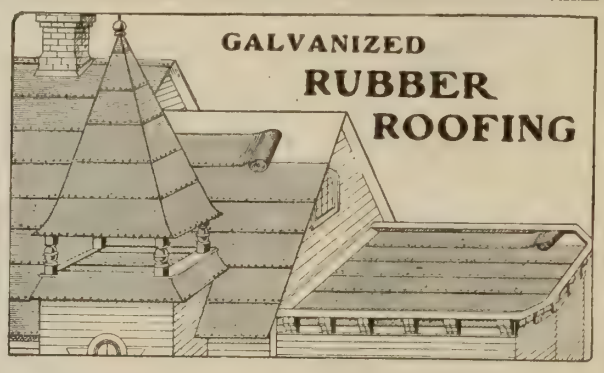

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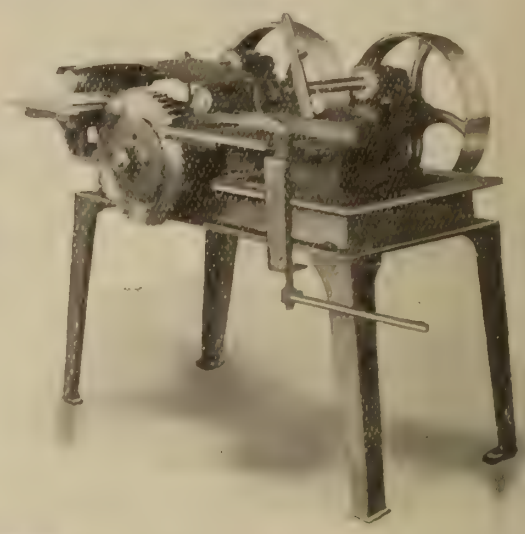

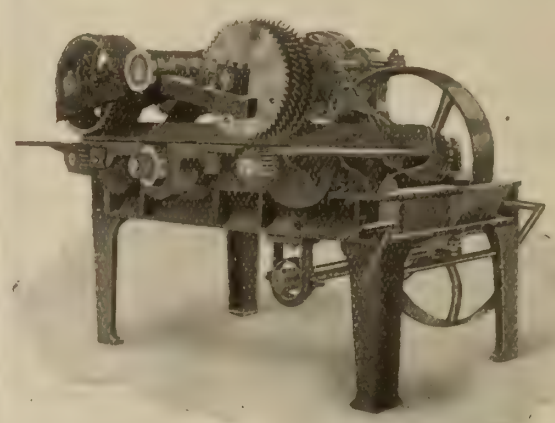

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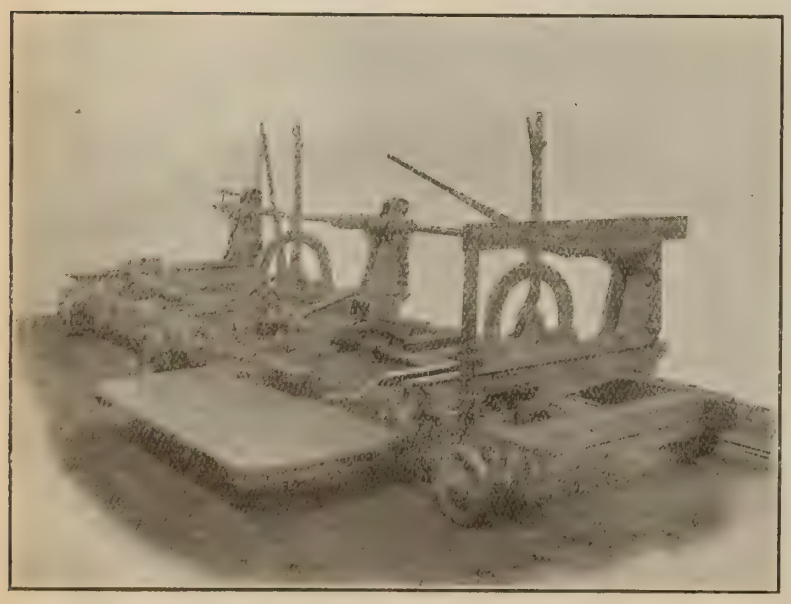

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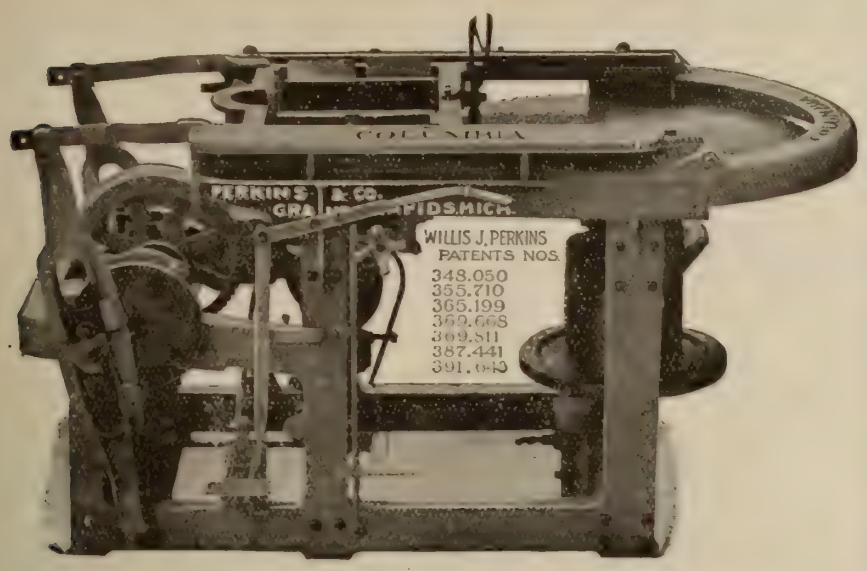

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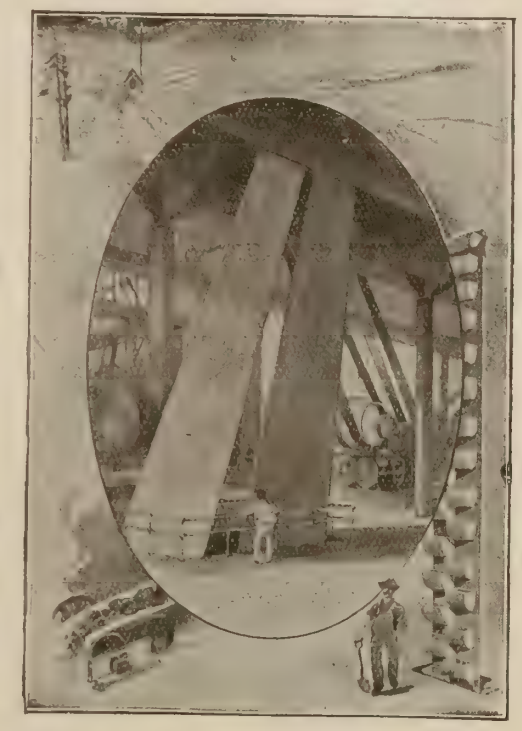

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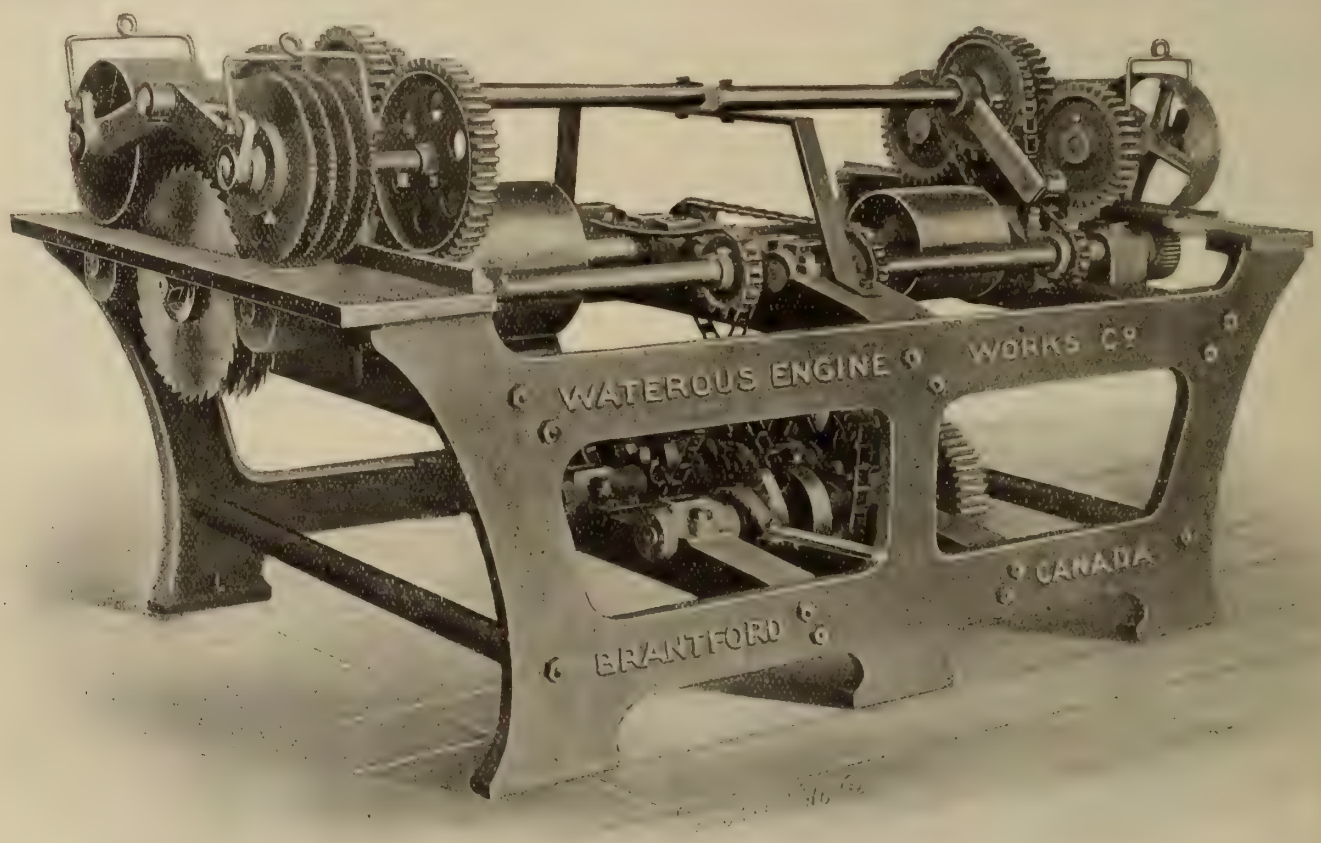

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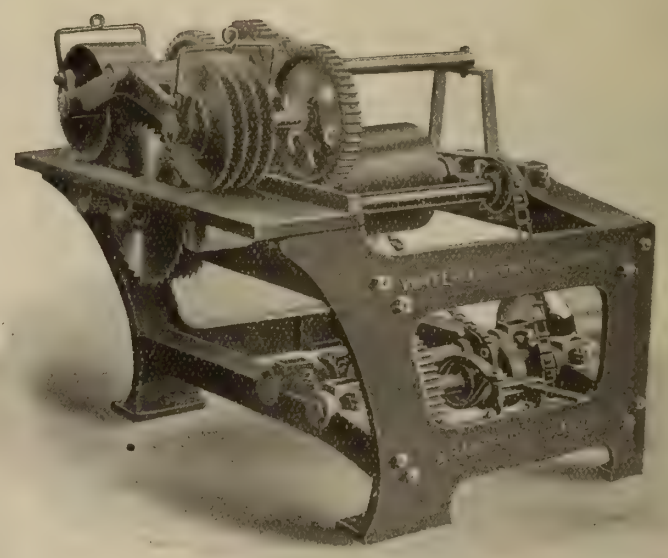

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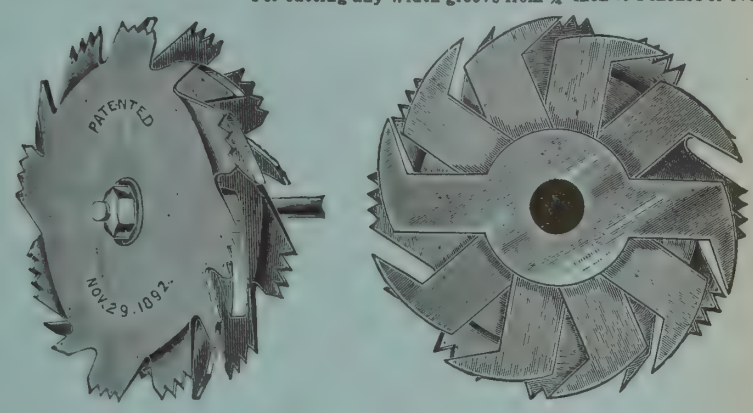

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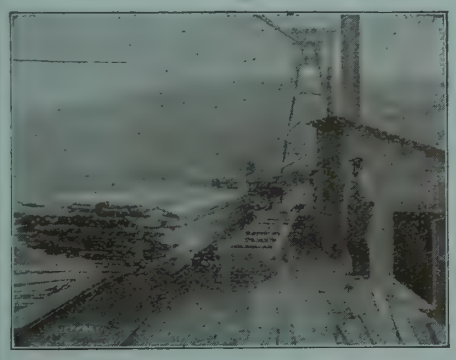

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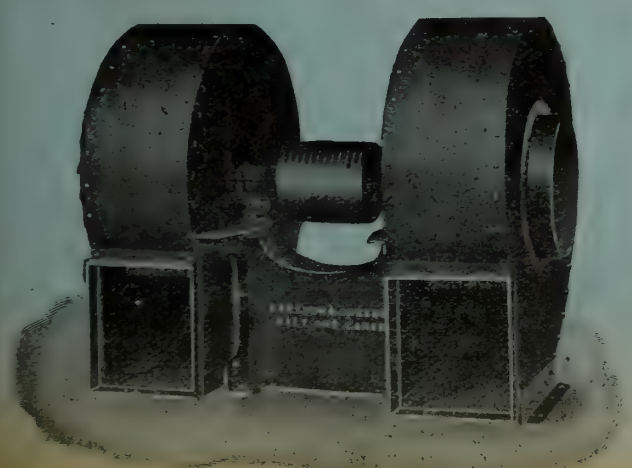

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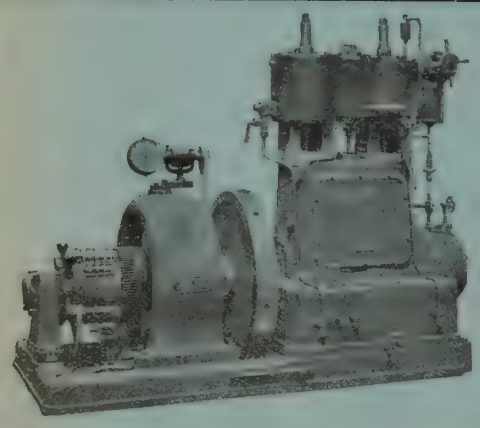

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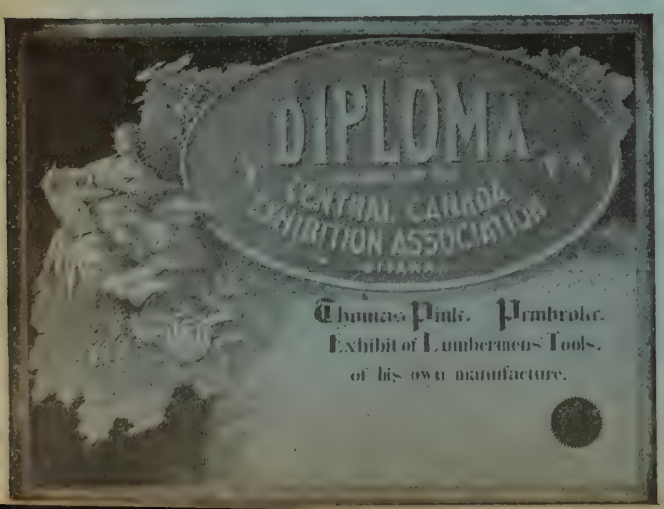

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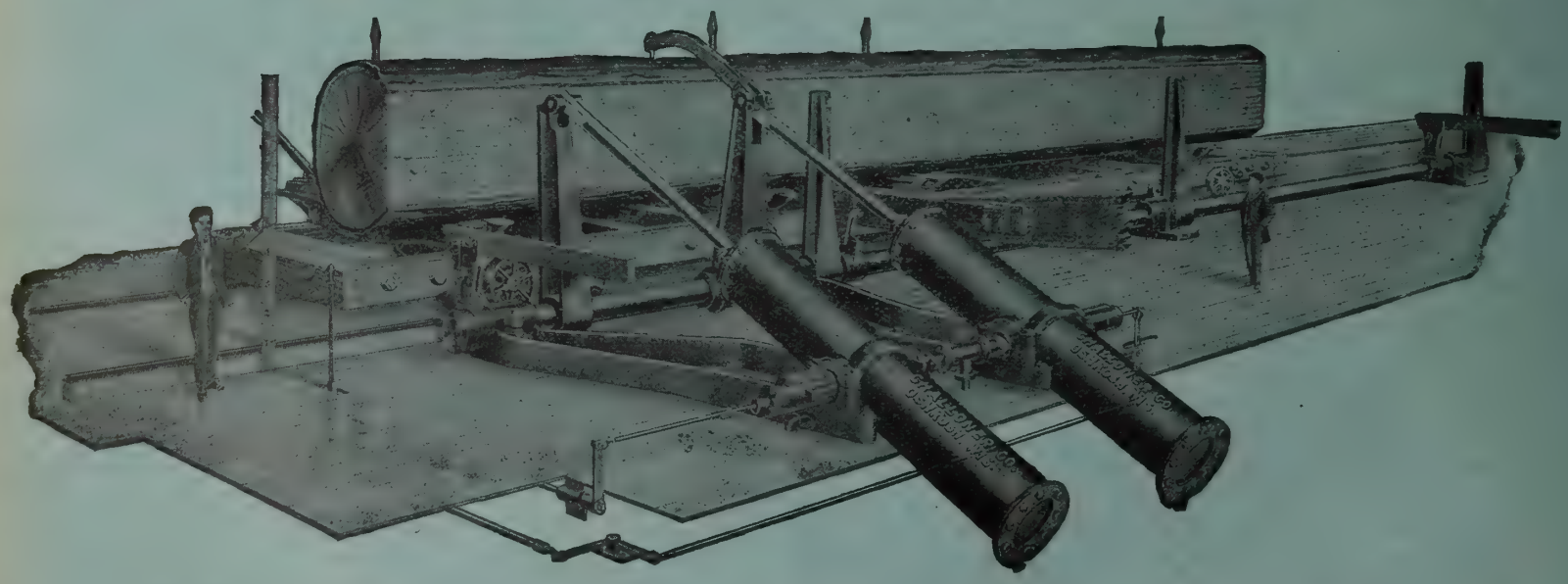

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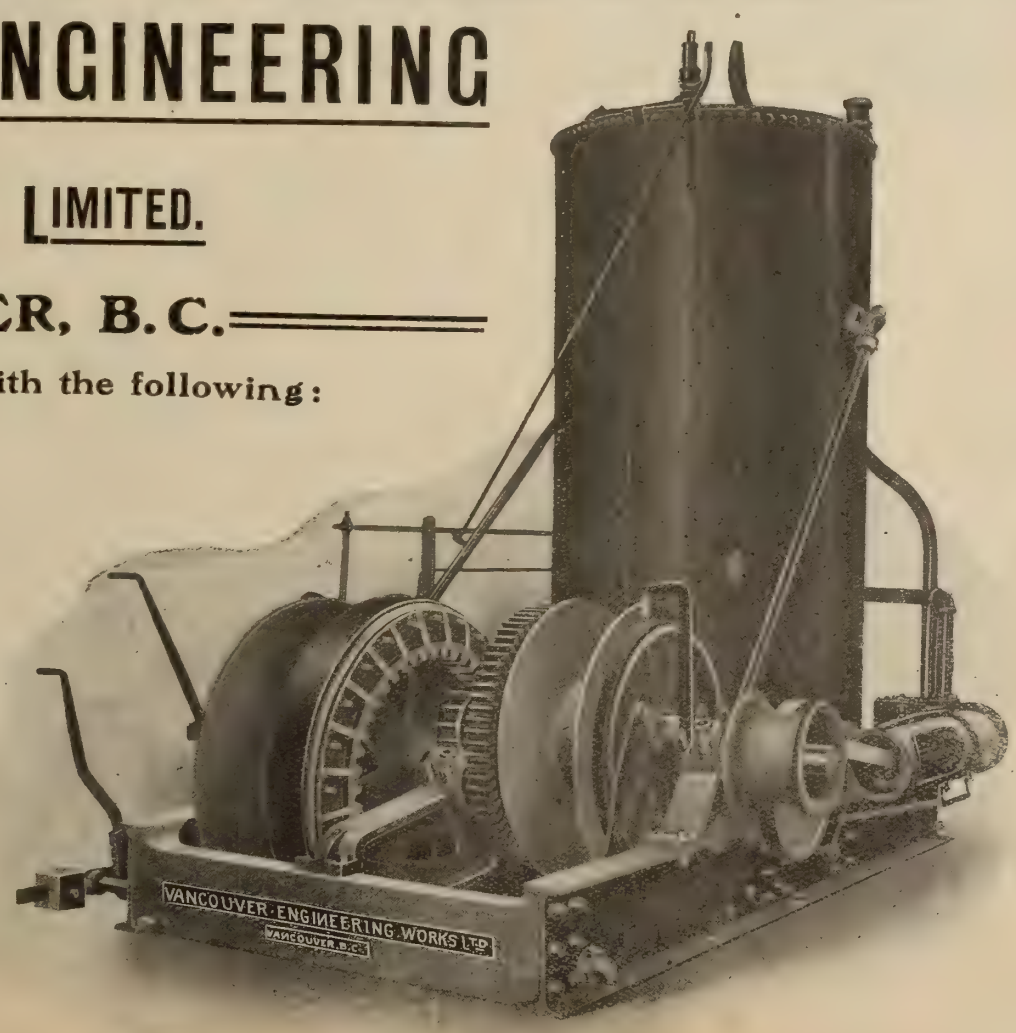

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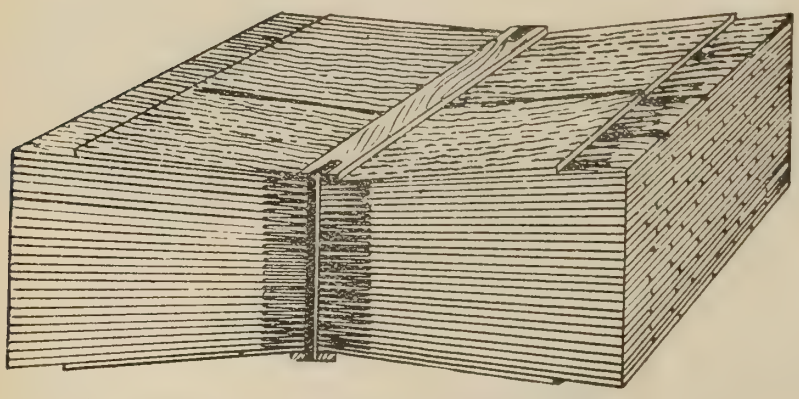

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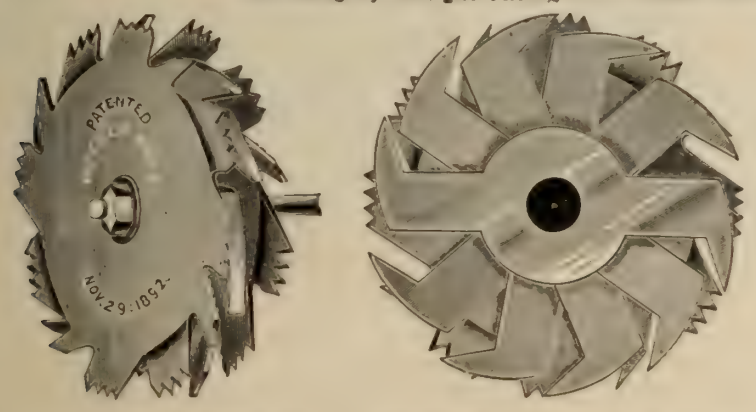

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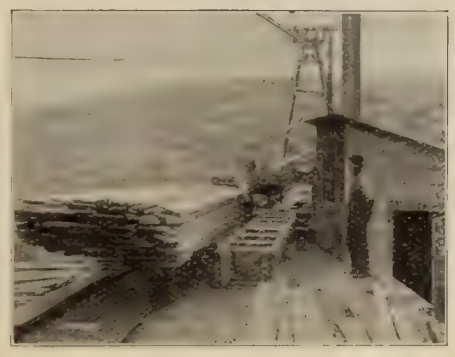

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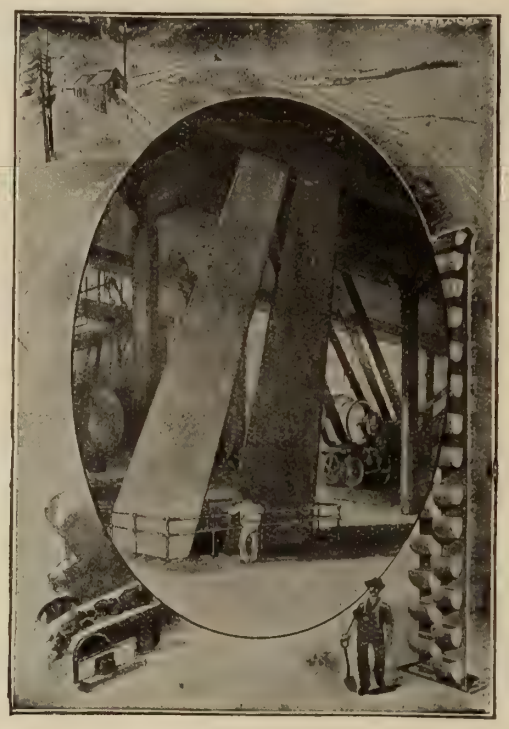

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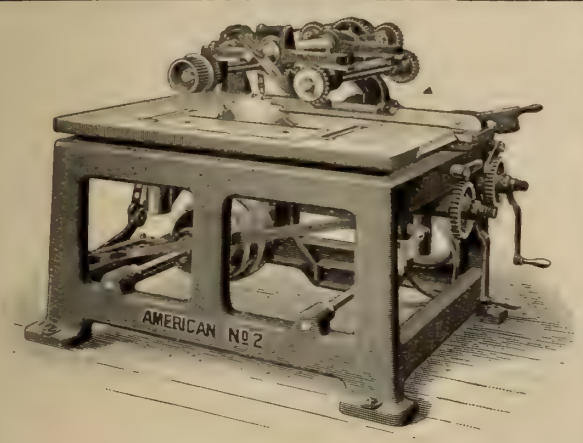

Fig. 5701. American No. 2 Self-feed Circular Rip Saw.

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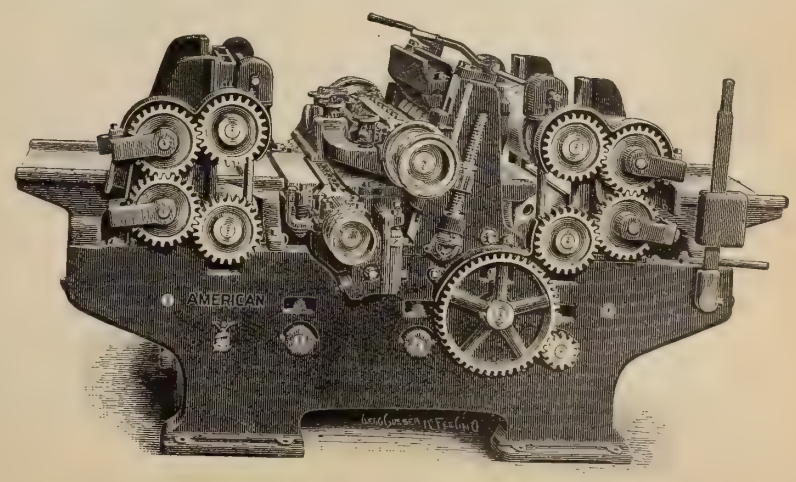

Fig. 7161. American Nos. 45 and 46 Double Surfacers.

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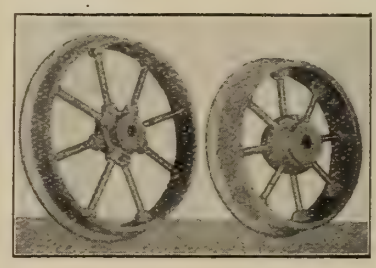

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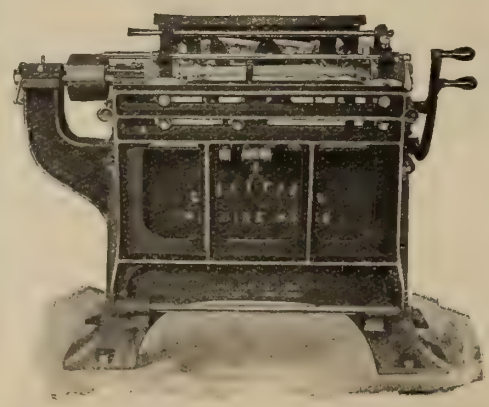

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THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in the lumber, wood-working and allied industries in Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN AND WOOD-WORKER is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "WANTED" and "FOR SALE" advertisements.

TORONTO — NOVEMBER 1, 1907 — MONTREAL

CHANGE OF OWNERSHIP.

With this issue of THE CANADA LUMBERMAN AND WOODWORKER it devolves upon the publishers to announce a change of ownership. For the past thirteen years this journal has been owned by the C. H. Mortimer Publishing Company. The entire interests and good-will of this company were recently purchased by Mr. Hugh C. MacLean, under whose direction the publication of THE LUMBERMAN will hereafter be continued.

For almost twenty-seven years THE LUMBERMAN has chronicled the many more or less important events which are now lumber history, and has aimed at all times to present a true condition in a frank and acceptable manner. That it has satisfactorily discharged its mission is indicated by a large clientele of advertisers and subscribers, whose numbers are steadily increasing.

What has been accomplished in the past is but an inspiration for future effort. A determined policy of improvement, designed to produce the best lumber journal in America, will be pursued by the new management. These changes cannot be undertaken in a day or a month; they must necessarily be brought about as a process of evolution. Every issue, we hope, will plainly reflect improvement in the reading matter, the advertisements, the illustrations and in typographical appearance.

A change which has already been decided upon, and which we believe will be appreciated by readers, is the publication of THE LUMBERMAN semi-monthly. Hereafter it will be issued on the 1st and 15th of each month, the arrangement of this number indicating in a measure the proposed new form of the paper. Coincident with this change the annual subscription price has been changed to $2.

From advertisers and subscribers we solicit and anticipate a continuance of the support and co-operation which have been so generously extended in the past, and to them we promise our best services.

HUGH C. MACLEAN, LIMITED.

A NEW DEPARTURE IN ISSUING TIMBER LICENSES.

In advertising for tenders for the right to cut pulpwood on certain areas in the Districts of Thunder Bay and Rainy River, the Ontario Government has imposed a rather unusual condition on intending operators, a condition which will set the example in Canada for the reversal of methods which promise to speedily denude the country of its forest wealth.

"Tenderers should state the amount they are prepared to pay as bonus in addition to such dues as may from time to time be fixed for the right to operate a paper-making industry on the areas referred to. Separate tenders must be made for each area or territory, and the successful tenderers will be required to erect a mill or mills on each of the territories or in such other localities as may be approved by the Government of Ontario."

That there should be a provision of this kind will be universally agreed, in view of the recent resolution of the American Publishers' Association calling for the removal of the United States paper duties. This is tantamount to an admission that the spruce areas of the United States have become so contracted that paper manufacturers in that country must presently look to Canada for their supply of logs. Now, up to the present we Canadians have accepted without question the supposition that the forest wealth of this country was practically inexhaustible. As a matter of fact, if present wholesale methods of cutting continue without any attention whatever being paid to preservation or reforestation, it will not be long until our land is as treeless as is that of our neighbors to the south. The Ontario Government can apply its regulations only to Crown lands, while the exportation of logs goes on steadily from private lands. In other provinces, lands, both public and private, are open to devastation.

Sir William Van Horne, at the annual meeting of the Laurentide Paper Company, held in Montreal on October 15, stated that he estimated the present holdings of Canadian pulpwood timber lands by Americans at 10,000 square miles. "I am in favor," said Sir William, "of compelling the Americans to manufacture all their paper in Canada as long as they obtain their pulp from us. One cord of pulpwood, exported as such, yields to all Canadian interests, including stumpage, cutting, handling and transportation, about eight dollars. The same cord converted into ground pulp yields, at this time, to the same interests, twenty-four dollars, and converted into sulphite pulp gives at least twenty-six dollars and forty cents, and into paper the handsome sum of forty-four dollars."

At the present time representatives of pulp and paper mills in Wisconsin, Michigan and Pennsylvania are in active competition for pulpwood on both the Quebec and Ontario sides of the boundary adjacent to the territory tapped by the Temiskaming & Northern Ontario Railway. They are buying all they can get for delivery this season, and in some cases are making contracts for supplies for several seasons ahead. Wisconsin operators who own pulpwood limits on the Quebec side of Lake Temiskaming are planning to cut their timber during the coming winter in sixteen foot lengths, raft it down the lake next spring to Haileybury, where the Temiskaming & Northern Ontario Railway is building a spur line to the wharf, rail it thence to North Bay, where it will be dumped into Lake Nipissing, to be again rafted to the Georgian Bay, and thence load it into barges for conveyance to Wisconsin.

Roundabout and expensive as this plan is, it will be carried into effect on a large scale—unless the Dominion Government takes action in the matter. To urge this a deputation, representing the pulp and paper section of the Canadian Manufacturers' Association, waited upon Sir Wilfrid Laurier and Hon. Messrs. Fielding and Paterson a short time ago, to ask that the export of wood pulp be prohibited. The deputation included President J. D. Rolland, Mr. C. Riordan, Mr. J. R. Booth, Mr. Rowley, manager of the E. B. Eddy Paper Company; F. C. Campbell, of the Canada Paper Company; H. Beirmans, of the Belgo-Canadian Manufacturing Company; L. Armstrong, of Grandmere, Que., and Albert Maclaren, of Buckingham. The deputation strongly urged views against allowing the exportation of pulp as such, pointing out that such a prohibition would make for the conservation of Canada's pulpwood resources and would compel the American manufacturers to erect their own mills in Canada, thereby assisting to build up a great industry for this country.

The following memorial was presented to the Government by the deputation: "Whereas it has been the policy of the Federal Government to encourage and promote manufacturers within the bounds of the Dominion by duties sufficiently high to protect home manufacture, and by bounties to encourage the use of home raw material; and whereas the Federal Government has expended large amounts to promote agriculture and to encourage immigration from the Motherland and foreign countries; and whereas we have within the bounds of Canada as a natural product spruce pulpwood capable of providing employment for a large number of our present people, and for many who may come to find homes here; and whereas this wood is being raised in Canada and shipped to the United States to keep pulp and paper mills in that country running; and whereas our present natural advantages should make pulp and paper our greatest industry; and whereas the exporters are stripping the lands of wood, while those with permanent interests in the country are striving to conserve the forests; and whereas the crop of

pulpwood is of very slow growth, and the supply already becoming inaccessible; and whereas the free export of pulpwood to the United States, combined with the tariff against our pulp and paper, favors the development of the paper industry in the United States rather than in Canada; therefore, your petitioners humbly pray that the exportation of pulpwood be prohibited by the Federal Government."

The Premier promised to give careful consideration to the arguments advanced by the deputation, which will return to Ottawa shortly, and present to the Government facts and figures bearing upon the present situation with respect to the export of wood pulp to the United States.

DON'T LIKE PULPWOOD RESTRICTIONS.

The agitation at present afoot in Canada to treat as a valuable asset our pulpwood areas and to bring about legislation whereby the export of raw pulpwood shall be prohibited is viewed in a rather unfavorable light by "The Paper Mill." According to that journal any legislation tending to increase the difficulty and cost to the United States of securing unlimited supplies of paper "would be inconsistent with the 'general' policy of nations"—the writer must surely mean "generous."

"This policy," we read, "which is recognized generally, is that there should be free exportation of all products, whether raw or manufactured. In the first place, the placing of such a duty would mean the practical confiscation of Canadian properties in which citizens of the United States and elsewhere have invested their money, for by this action Canada would very naturally largely depreciate the values of those properties; while in the next place the enforcement of an export duty or of a prohibition against the exportation of pulpwood would be regarded by this country as an unfriendly act, and, of course, would be met by retaliation.

"Canada's only customer for pulpwood is the United States, and if her pulpwood is not purchased by this country it must be used by pulp and paper mills yet to be built in Canada or must go to waste. Canada's reply to this would be that the mills must be built, in order to utilize her pulpwood; but even if the Dominion succeeded in compelling this to be done, it could only be accomplished after the lapse of some years; so that, assuming for a moment and for the sake of argument that this country is dependent on Canadian pulpwood, and that Canada prohibits the exportation of that wood, and that our paper production—by reason of that prohibition—is reduced, it then naturally follows that there will be what may fairly be called a 'paper famine' in this country, so far as wood papers are concerned, for the reason that Canada is unable to supply that deficiency in paper tonnage and will be unable to supply it for some years to come.

"In other words, if the contention of the American Newspaper Publishers should be established, there would be such a shortage of paper here that the price would respond so quickly and so much that undoubtedly many of the publishers would be wiped out of business.

"As to the retailiatory measures, Canada may rest assured that if her pulpwood campaign is carried out to the extent that some of its promoters desire, this country will not consider such action friendly, but will protect its own interest by such legislation as may be necessary and which may work considerable hardship to the entire Dominion."

One is strongly reminded, when reading such a statement, of the big bully and the small boy with the apple. Says the former, "Give me that apple or I'll kick you," whereupon the latter is usually glad to hand over the object in question, at the same time feeling tolerably sure that he'll get the kick anyway. In the present case we are asked to hand over our pulpwood or if we don't we'll be starved out sooner or later. Now, like the small boy, we have learned from experience that the United States has not in the past been particularly noted for self-sacrifice, and if our present positions were reversed it is safe to assume that Canadian paper manufacturers would long ere this have had their plants erected on American soil. In any case it wouldn't have taken the United States this long to make legislation for the conservation of a valuable national asset.

The policy that the United States would fain adopt is to preserve her spruce areas by using up those of Canada. It would certainly be excellent policy to leave nature alone over there for a generation or two to reclothe her now naked timber areas. Moreover, it would be a gracious act on our part to throw open our spruce wealth while this interesting resource to the aid of nature was in progress, but what condition would we ourselves be in ultimately? The best timber would have been removed from our forests and that remaining would be the least desirable and accessible in the country. We would have had the smallest possible return for our forest wealth and besides have precluded ourselves for a generation from sharing in the wood pulp industry of the continent.

Under present conditions thousands of cords of pulpwood are anually cut in Canadian forests and taken over to the United States to be manufactured into pulp and paper. If that raw material were kept here, pulp and paper mills would be erected and we would secure for ourselves great industrial advantages. Pulpwood is scarce in the United States. Here it is comparatively plentiful. Moreover, when new railroads tap the northern forest areas, as they soon will, and modern methods of preservation and reforestation are adopted, the growth of the industry will be phenomenal. If it is fair to protect manufactured products by means of a tariff, it is not unfair to ask for the protection of natural resources.

THE WESTERN FINANCIAL SITUATION.

By A. E. Watts, Wattsburg, B. C.

The troublesome disease called "Stringency in the Money Market" has been diagnosed and expiated upon by the great authorities on such subjects after the manner of quack doctors, causes are explained in a superficial way, either through ignorance or lack of ability to grasp the subject and probe to the bottom.

The popular explanation given by most of the quacks is that this country is developing too quickly and using up capital faster than it can be imported or created; that is to say, the farmer is plowing too much land and producing too much grain, the manufacturers and their workmen are turning out too much of their products, the busy bees produce too much honey.

Yet the great bugbear, stringency of the money market, spells ruin, disaster, and poverty, that is, if the panic mongers can have their way, and the general public are as helpless as a flock of sheep in the clutches of a horde of financial wolves. A panic means millions of dollars filched from the general public by the wolves, consequently the panic always starts by the yelping of the wolves as they fully intend it should.

Panics of all kinds, in military actions or during fires in theatres are always assisted by, and disasters occur entirely through, the inherent cowardice of the human race. Just so is it in financial matters. The great financial string pullers who have the power to bull or bear the markets of the world, which they do whenever they can see the chance to rake in millions at the expense of the toiling masses, cry fire when there is no fire, cry money is scarce when there is just as much money in existence as ever there was, which can be proved by the rule of thumb and by statistics. Bankers assist in making the scare worse. They pay depositors no higher rates of interest, but they raise the interest on loans, they paralyze commerce and industries at one fell swoop by withdrawing credits they have encouraged merchants and manufacturers to accept for legitimate business enterprises.

The Government and the horde of howling politicians are guilty of criminal negligence for taking no action in these matters which are of more vital importance to the masses than any other questions of the day. Legislatives measures should be enacted, making it impossible for financiers to paralyze industries.

Bankers, who encourage their clients to take funds for business enterprises and then demand immediate payment when they know it is impossible to comply, are guilty of worse than a moral crime. They are crushing and absolutely ruining merchants who could under considerate treatment pay two hundred cents on the dollar. I do not say all banks are guilty; there are some exceptions. I have no personal cause for complaint, therefore what I say cannot be construed as being prompted by any feeling of pique or animus. At the same time many flagrant cases have come to light, and banks adopting such methods should be tabooed and boycotted by the general public and by merchants and manufacturers. It is also the duty of the Government to take a hand in the game, which it could easily do, and thereby palliate the effects of a threatened panic.

It is sheer nonsense to say money is scarce owing to over-development of a country. That is a superficial view that will not bear analysis. A country or a property in the course of development does not exhaust nor destroy money, money being simply the medium of exchange. The same amount is in existence all the time, it may be diverted into various channels, but it is always available in some place; if a person borrows a million to develop a business or a property, not one cent of the actual money remains in that property—it simply changes hand and quickly finds its way back to the bankers, but it is in no way diminished in volume.

There might be some grounds for the argument that over-development exhausts money if the methods of the ancients were followed, and the money when earned by the masses was buried or hidden away. The cry of shortage of money is more imaginary than real, nevertheless, the effects will be just as disastrous if it culminates in a panic, but why should a panic occur in a country when in a high state of prosperity? Money like labor will be attracted wherever it can earn the highest wages or rates of interest. Why cannot the bankers of Canada pay a higher rate of interest, and charge their clients in proportion, and if they must tighten the purse strings, let it be on speculative transactions, and not on legitimate industries, except in case of over-production. In the latter case it would have a very salutary effect, if made general.

A glance at the chartered banks' statements to the Dominion Government from time to time proves that the so-called stringency does not exist in fact, though it is made to do so in theory, and that really there is no just cause for uneasiness and certainly no reason for a panic.

PURCHASE OF WELL-KNOWN TRADE JOURNALS.

A transaction has been completed by which Mr. Hugh C. Maclean, of Winnipeg, publisher of "The Commercial" of Winnipeg and "The British Columbia Lumberman" of Winnipeg, has bought out the Mortimer Publishing Company of Toronto and Montreal. This company publishes "The Architect and Builder," "Electrical News," "The Canada Lumberman," "The Contract Record" and "The Western Canada Contractor" of Winnipeg. Mr. MacLean will conduct the Mortimer Company as a distinct business.—Globe.

A FORESTRY POLICY FOR CANADA.*

By Professor E. B. Fernow, Dean of the Faculty of Forestry, Toronto University.

It is a great satisfaction to me, that I am permitted to make the first public utterance of my ideas on a forest policy for Canada before a set of men who are accustomed to think of and deal with concrete things. I propose this morning to make you see that forestry should not be in Canada a mere academic subject, an abstraction, but should become as soon as possible a concrete reality.

I dare say that there are few in this audience who are ignorant as to what in a general way forestry means, and why this art should be employed in the management of our woodlands. But as to the methods of its application even the best posted lumbermen may still have something to learn.

I do not propose, however, to discuss technical questions before an audience like this. As manufacturers you are naturally interested mainly in the question of raw material, the outlook of supplies for your manufactures, the question as to their continuousness, as to whether the natural supply is inexhaustible, as has been often claimed, as to whether the necessity has arrived for actively providing for the future, in other words, as to the policy which we should now pursue with regard to our timber supplies. Only when this question has been answered does the question of the technical details come up.

Where Forestry Begins.

The very title which your secretary has proposed for my subject, "Reforestation," suggests—I beg the gentleman's pardon—a considerable ignorance as to the state of things, and as to the proper policy and proper method in the treatment of your timber resources, if by reforestation is meant artificial replanting. Re-foresting presupposes de-foresting, and the title of the secretary's choosing implies that a forester's work begins when the country is de-forested. But, truly, forestry begins, or should begin, when the first tree is cut, so as to make the laborious and expensive method of artificial reforesting unnecessary.

When I tell you that on the twelve million acres of German State Forests, which are managed for continuity of wood supplies, the expenditure for planting is less than 18 cents per acre per year, or less than 5 per cent. of the total expense, and that in Prussia of the cost of producing one cubic foot of wood, namely, 2 cents, only one-third of a cent goes to planting, you will realize that in a well managed forest property the planting cost is a relatively small item.

There are, to be sure, large areas in Canada where deforestation has progressed to an undesirable, if not dangerous degree, and where it is not only desirable but practicable and profitable to begin the work of artificial reforestation of these denuded areas. The southern sections of Ontario, rich in agricultural lands, are almost entirely cleared of timber growth. Here a farm area of five million acres can be found containing less than 10 per cent., or 500,000 acres, of woodland, and, I am told, there is altogether probably 50 per cent. of waste land on these farms that could be more profitably employed for wood crops than for farm crops. During the recent strike in the anthracite coal regions of the States, this section actually suffered from a fuel famine, because the farmers' woodlots were too scanty to supply domestic needs. In this section, indeed, reforesting by private land owners has been begun, stimulated by wise government aid with plant material and advice.

You should, however, understand that such planting of farmers' wood lots has no more meaning for the general lumber supply than the apples in your back garden have on the fruit supply of the country. It can, for practical and technical reasons, accomplish only three things, namely, to furnish local domestic supplies, to improve conditions of the farm, and to make waste lands useful producers. The policy begun a year or so ago by the Ontario Government of encouraging and assisting farmers by plant material and advice in re-establishing wood lots, is a wise one, and only needs to be expanded annually in order to hasten the day when its profitableness to the individuals and to the province in general will be demonstrated beyond peradventure.

Value of Timber Areas.

But the much larger portion of Ontario, and of all the other provinces in the east, is still in the woods, and the much more important question is as to the condition, present use, and future value and use of this portion.

At the very outset of an inquiry into the conditions of this property, we find a woeful dearth of collected information, an ignorance which leaves the answer open to challenge, because it is based on doubtful facts. Canada has the reputation of having been and still being a great forest country, and one of the most prominent wood exporters of the world. It is claimed by some that 800 million acres, or over 37 per cent., of the land area is under wood.

But if we look at this vast forest area from the manufacturer's point of view, from the standpoint of supplies for the arts and industries —of its commercial value, and study merely the geography and nature of the country in the light of the reports on the more or less explored outlying parts of the same, we will come to the conclusion that 300 million acres and perhaps less will cover fully the commercially valuable timberland area, actual and potential, or not much more than one-half of the commercial forest area of the United States. Relatively then, Canada is a poorly wooded country.

This may sound curious to those of you who are located in the vast forest region of Quebec, or Ontario, or New Brunswick, or British Columbia, but these are the smaller portions of your great country and the vast prairie and plains area which is not at all, or only scantily, wooded, and is now beginning to be developed rapidly, must also be taken into consideration. Moreover, at least one-fifth of this area is on the Pacific side of the continent.

Possibilities of Our Woodlands.

Area, however, does not mean much except possibilities. Contents in the virgin woods are extremely variable and the more difficult yet more important question is how much available log material this commercial timber area can furnish. Large statistical figures appear to the layman a convincing argument of plenty, but the only way of understanding their meaning is to place them in relation with other figures. At the great forestry convention last year at Ottawa, the vastness of Canada's forest resources was attempted to be displayed by a placard stating, probably based on the best attainable authority, that 532 billion feet of lumber was still available for cutting, and this was stated as if it were a large supply. This apparently enormous figure, however, would not suffice to supply the present annual consumption of the United States for more than a dozen years, nor that of Great Britain, which is more frugal in wood consumption, for the time it takes to grow a good sized log, say 60 years.

All these statistics are, I repeat, merely random guesses, and nobody really knows with any reasonable degree of accuracy the conditions. But I suppose the Statistician of the Dominion had good basis for stating as long as twelve years ago that, "the first quality pine has nearly disappeared," and that we are within reasonable distance of the time when, with the exception of spruce as to wood and of British Columbia as to provinces, Canada shall cease to be a wood exporting country." If the estimates of that authority were anywhere near correct the amount of white pine remaining would now be less than 20 billion feet, not enough to supply the present demand for say another decade, and that relatively small balance is mostly confined to Ontario.

Elementary Facts.

Without going into further statistical guesses, I believe, any one familiar, by observation and reading, with the forest conditions of Eastern Canada will subscribe to the following general statements of the situation:

The larger portion of the commercial forest area of Eastern Canada is cut over and culled of its best timber.

The major part of the culled area, and especially the pineries, is burnt over; the natural reproduction being mainly of inferior kinds.

The supply of spruce for paper manufacture remains relatively the largest item in the commercial timber supply.

Little or nothing is done to protect or encourage the production of future supplies.

Perhaps a brief glance at the condition of the wood industry may be desirable.

Although Canada is rated as one of the foremost wood exporting countries, it has in later years fallen considerably behind the United States, the latter doubling its wood exports during the last decade, and having in 1904 exceeded the $60,000,000 mark, while Canada has hardly exceeded at any time $40,000,000, and the rate of increase in exports, although steady, has been only one-third to one-half as rapid, namely, about three per cent. per annum. In comparison with other exports, however, the exports of forest products has considerably declined, for while in 1868 these formed 34 per cent. of the total exports, in 1904 they represented only one-half of that figure. To my mind, this falling off of wood exports would appear as an advantage, if it were the result of policy and not of natural decline in accessible supplies. It is, also, to be considered an improvement that the proportion of lumber and manufactured wood goods, as against unmanufactured material, has constantly increased during the last decade, namely, from 5 per cent. to 12 per cent. of the total exports of forest products.

The census of 1891 made the total forest production of Canada $80,000,000 (16 per capita), the cut being figured at 1,400 million cubic feet for home consumption, and 600 million for the export, or altogether over 2,000 million feet, say 400 cubic feet per capita, a figure not very different from the per capita consumption in the States, but twenty times that of Great Britain.

Our Present Wood Consumption.

If we apply the same rate of consumption to our present population, which is probably not much below 6,000,000, we can safely place

*Address delivered at the Toronto Convention of the Canadian Manufacturers Association.

our present wood consumption at round 2,400 million cubic feet of actual material, which, with existing standards and wastefulness of logging, represents not less than 3,000 million cubic feet of wood as it grows in the forest. That is the annual growth of not less than 50 million acres under good management, and of three to six times as many if left to mere natural growth. I bring forward these crude and not altogether reliable figures to make you realize the fact that it is time to change the attitude towards the treatment of your timber resources, and that those who supinely laugh at the efforts of the forestry propagandists are either ill-informed or unpatriotic.

To Ensure Future Crops.

I have no doubt that when the secretary chose the word reforestation as the title for my remarks, he had nothing more in mind than to estimate the general subject of forestry, which certainly implies reforestation, artificially or otherwise, that is, the use of existing forests in such a manner as to insure future wood crops. Technically, there are no mysteries as to how this may be done. Some knowledge of the life history of the species composing our woods, and some knowledge of what experience has been gathered during the last hundred years or more by European foresters suffices to permit a judicious man to direct nature in doing his will. For, there is no question in spite of some unimformed doubters, that the technical knowledge gathered in the Old World in forest growing is as applicable in the New World as the knowledge of growing cabbages.

The difficulty of reforestation does not lie in the technical but in the economic direction. The question is not, "Can the white pine be reproduced, and how?" but, "Can I afford to do the things which are necessary to reproduce it?" As far as private forest owners are concerned, it is purely and absolutely a financial question, as to whether it pays better to practise destructive lumbering or conservative lumbering, which is the beginning of practicing forestry.

The Economic Side of Forestation.

The answer to this question is, of course, a matter of calculation, as in every other business; the same factors which enter into profit calculations in other business enter here. There is only one factor that is essentially different and characteristic in the forestry business, the time element. In this it differs from every other business except life insurance. The manufacturer deals with months, and possibly a year or two which elapse between the receipt of the order and the delivery of the goods, the farmer reaps anually, and the fruit grower within ten years from starting the orchard. But to grow a log of useful size takes from 60 to 120 years. Most of the trees which the lumberman cuts to-day are over 150 years from the seeding time, and, while the forester can to some extent hasten the processes of nature, he will only rarely bring acres of forest growth to utilizeable size for lumber in less than two generations.

Let us look into this important factor of forest production and see what it implies. In the first place, the forester must be a seer into the future. He must feel sure that his crop will be in demand when it matures, that it will meet the changed requirements of a different civilization, that it will be able to compete with other materials which can be used as substitutes, and finally that it will pay for its production.

A Permanent Demand Exists..

Nobody who has studied the history of the world as regards wood consumption, and who has realized the reason for the extensive use of this most useful material, will doubt that, as long as civilization lasts, wood in some form will be a desirable and much-sought material, that cannot be displaced entirely by any substitutes, but of course the character and form and amount of its use may greatly vary.

No more interesting experience on this score could be cited than the ups and downs of the beech forests and tanbark forests of Germany. The latter have become unprofitable by the introduction of quebracho tan. The former, a result of the fuel famine of a hundred years ago, became a drug in the market, when coal was developed, then became valuable again for railroad ties (impregnated), these being displaced by metal ties, and now only by compromise between the Railroad and the Forestry Department do these beech forests find a market.

We see, then, that the time element in forestry is a speculative element which may all but ruin an otherwise legitimate business.

The time element, naturally, renders the financial calculations somewhat hazardous. What prices will rule when our crop comes to market? What interest rate shall we figure on the long time investment? What expenditures can we afford now with the assurance of profitable returns? These are all questions of a speculative character. Forestry really is dealing in futures!

We may have no doubt that wood prices will increase, as they have increased in the past; indeed, for a time at least, at a greater rate than in the past, for within the last decade not only has the per capita consumption of wood among all civilized nations increased at a rate of about 3 to 5 per cent. compound per annum, but all the exporting nations have waked up to the realization that their forest resources are not, as they had supposed, inexhaustible, but are, indeed, measurably near the time of exhaustion, and have begun to appreciate their value, and have placed bars on their exportation, or otherwise limited the cut.

Wood prices in Prussia for 65 years prior to 1895 experienced a rise of 1 1-2 per cent. per annum. They doubled in the next 35 years, and rose 50 per cent. in the next 30 years. Since the 15 years from 1890 to 1905, the rate of increase has been nearer 2 1-2 per cent., namely, from 4.4 to 6.8 cnts per cubic foot.

In Canada, from 1850 to 1894, the average annual rise has been not less than 5 per cent. You know how much more rapidly it has risen since.

In the United States, the rise has been for some time at 2 1-2 to 3 per cent., and in 1900 precisely the timber famine began, if sudden high prices denote dearth.

There is no doubt that wood prices will rise and that quickly, but where is the limit, the definite figure which we may use in a calculation made to justify a present expenditure?

A World Price for Timber.

I believe we would be safe in expecting that within the next 25 years, when the United States and Canada will have pretty nearly careered through their entire timber wealth, will have learned to use wood economically, reducing their quota from 350 to 400 cubic feet per capita to 20 or 30, as is possible, and when all other nations will have done the same, namely, have nearly exhausted their natural timber growth and have come down to forest management, that then we shall have also come to world prices for wood as with other staples, and that probably the highest prices now prevailing in the interior parts of Europe will be ruling high prices in general. Such prices will make common pine stumpage not less than $20 per thousand.

As regards interest rates on such long time and, at present at least, hazardous investments, who will venture to suggest a proper figure? In Germany, where forest property is as safe as any other even as regards fires, it is customary to apply a rate varying between 2 and 3 per cent., compound, of course, if, or whenever, such calculations are made at all. For although Germans are undoubtedly good business men, and know as well as the next neighbor how to figure, the forestry business is carried on very largely on other considerations than strict financial calculations. These considerations are partly general economic ones, partly of historical character.

Afforestation a Government Duty.

The State Governments became large forest owners somewhat over 100 years ago, and they have learned to consider themselves the guardians of the future as well as of the present, hence they have persistently and jealously carried on a conservative forest policy, without permitting financial considerations to interfere with cultural ones. Forestry with the Government was a duty, a work of internal improvement, which could not be expected from private individuals. That in the end this work has paid handsome revenue was, of course, more than gratifying. There are even now in the German forest administrations many things done that would not stand a strict financial test.

City and town corporations were forest owners long before the States, for German communities were originally socialistic republics. The States assumed surveillance of the management of these properties, partly for fiscal reasons, partly for the same reasons that actuated them in the management of their State forests, so that about 50 per cent. of the forests of the country are under direct State control. Of the balance, owned by private individuals, a portion is subject to entail, family estates which by agreement of the noble owners in times gone by are under certain fiscal control by the Government, and another portion is also under partial control, to prevent mismanagement which would cause damage to neighbors or to the country at large.

We find, then, in the end, that only about 25 per cent. are left unconditionally to private will, and, if you want to see mismanaged woods in Germany, you must hunt up some of these private forests without State supervision.

There is now—and has been in progress for some time—among forests a battle royal as to the proper way of figuring the financial results of forest management, but no agreement has been reached, and even the necessity of such calculations, for the governments at least, is not admitted by many. Meanwhile the governments and the supervised corporations and private owners reap the benefit of their persistent, conservative policy and of their improvements in the forests and in the forest service in the shape of continuously increasing revenues—true revenues, not derived at the expense of capital, without decrease, nay with rather added value to the investment and increased per acre production.

The Prussian State forests, for instance, with some seven million acres, yielded in 1850 a net revenue of less than 50 cents per acre; in 1890, $1.30; in 1905, $2.43. In Saxony, on a smaller area, somewhat over 400,000 acres, the felling budget was 60 cubic feet per acre in 1820, 70 cubic feet in 1860, 90 cubic feet in 1890, and 93 cubic feet in 1905; the net revenue rose from 95 cents in 1820 to $2.39 in 1860; to $4.37 in 1890; and is now (1905) $5.25.

But to attain these results the Government had patiently to wait, patiently to spend money and energy and knowledge, like any other business man, only for a longer time, for a hundred years.

What private forest owners will work for such a long time and maintain an undeviating policy of conservative management?

There is one other aspect in this long time element that has much to do with the aversion which private capital has shown almost everywhere to this kind of business.

When Timber Becomes Marketable.

The maturity of timber, the ripeness for the axe, is not a matter of natural period, but of calculation and consideration of its marketableness. The year's growth cannot be harvested or marketed; it requires an accumulation of annual growths before a tree becomes useful. When posts; at 30 to 40, besides fuel, there may be telegraph poles and railroad ties; at 60 to 80 years, small log timber will have developed, and then this will increase in proportion constantly for the next hundred to two hundred years, quantity as well as quality improving. Now, this method of accumulating the harvest and being able to cut it at various times at our choice brings with it, just like a life insurance, a continuous locking-up of capital and interest, which only a capitalist, a man of means or a strong corporation, can stand. Thus, a 100-year-old stand of pine has not only locked up the soil and whatever initial investment was placed on it in the way of planting or otherwise, but it has also locked up the interest, a 100 years of growth, accumulating, say, 6,000 cubic feet of wood per acre, worth, say, $200 at least.

Large Capital Necessary.

In order to turn wood crop production into an annual business, it would be necessary to have one stand become ripe or 100 years old every year, so that we may have a regular annual harvest—that means 100 such stands differing by a year in age. The capital involved in such a series of 100 age classes, as it is termed, would figure up according to different soils and species from 400,000 to 1,500,000 cubic feet, and probably not less than $8,000 for the 100 acres. To make a living from forest growing as a business, you can readily see that not less than 50 such series, worth not less than $400,000 in the wood capital alone, would have to be kept up to insure an annual income of $10,000.

These calculations are, to be sure, only schematic, and would fall out more favorably here and there, but they give you an insight into the character of the financial aspect of forestry. It is a business for large capital, with long time investments.

Who will be willing to lock up his capital in such a business, especially in this country when still thousands of acres of grown timber are practically being given away, as in British Columbia?

The possibility of harvesting earlier, of lowering the rotation—as the length of time is called to which the crop is allowed to grow—is a constant temptation to do so, and, as a matter of fact, we find that in France, where private ownership prevails, the rotation has been constantly reduced, until now little more than firewood is grown on the larger portion of the forest area, and the bulk of sizeable material has to be imported.

Where Responsibility Rests.

My object in bringing these financial considerations before you is to point out that forestry financially defined means every time curtailing present revenue or making present expenditures for the sake of future revenue, that there is no good reason why we should expect timber limit holders as a rule to adopt forestry methods, voluntarily, that finally the State, the Government, the people as a whole, being the guardians of the future of the nation as well as of the present must realize that forestry is their business, that they alone can take the risks and the low interest rate which this business offers.

Private owners and timber limit holders may find it to their advantage here and there to do things, or rather to avoid things, the doing or avoiding of which will insure a better utilization in the present and a better future for their holdings, but ultimately I have no hope of an effective forestry system being introduced unless the governments are thoroughly committed, change their methods of disposal of timber, and introduce forestry principles in their land management.

Present Forestry Methods Must Go.

The proposition of a change of methods from the current ones does not necessarily imply a criticism of the latter. The methods as they exist are of historical growth and were devised for pioneering conditions and with a different purpose in view, namely, to secure income and to open the country for settlement, and for these ends they probably were the best that could be devised. But the time is here, if I am not mistaken, or rapidly approaching, when it will be wisdom to change these methods, when a new purpose is to be substituted, when not merely present profitable exploitations, but the future needs are to be considered, and hence new methods are in order.

Some one has, with cogent logic, shown that the present method of disposing of timber limits under the triplex charge of ground rent, bonus and stumpage dues, discourages the application of conservative logging methods on the part of the timber limit holder.

But I go further and maintain that the timber limit holder cannot, under any system of lease, be expected voluntarily to introduce forestry methods. It is the Government that must take the risk and stand the cost which new prescribed conditions of logging involve, and enforce such conditions.

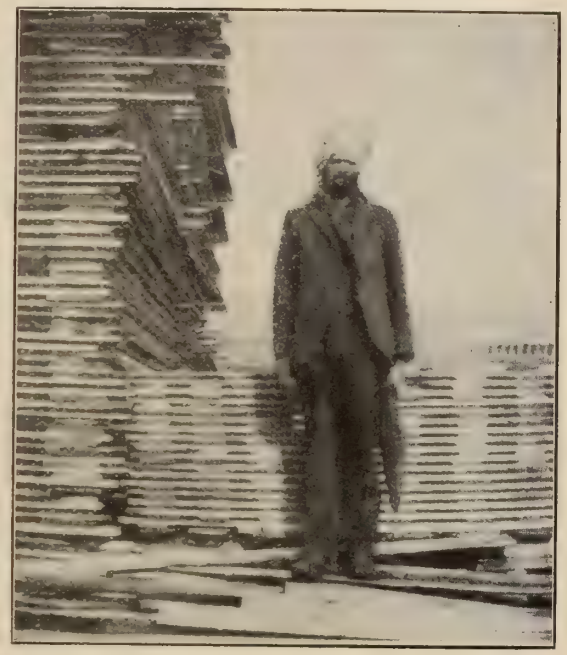
There can be little doubt but that the Government alone can take care of the future, and whatever else may be said about government ownership of public utilities, the long time element in forest production singles it out as the most needful of government activity.

Fortunately, in the Dominion the Government does own the basis of forest production, the land itself and the virgin as well as the cut-

Concluded on page 24.

THE HINDU IN THE SAW MILL.

In the racial difficulties which are at presnt agitating Canadians on the Pacific coast no employer of labor is more directly interested than is the lumberman. He has felt particularly the scarcity of dependable white labor and has been compelled to hire Hindus, Japs and Chinese to carry on his industry. He realizes that the Hindu is not a good citizen. It would require centuries to assimilate him and apparently he is unconcerned about permanently identifying himself with a nation possesing little in common with himself.



Type of Hindu employed in the sawmills of the Northwest.

Moreover, the Hindu is not a good workman. He is not skilful in manual labor, neither does he appear to grasp readily even the most elementary problems of his adopted country. In the coarsest kind of labor he is not the equal of the white laborer. However, he has come in response to a demand created by the scarcity of labor. The lumber manufacturer prefers white labor at a higher price, because the Hindu at lower wages does not bring as good returns to the mill.

LUMBERMAN FOR ELECTORAL PURITY.

Unusual interest in the political situation in Western Canada is being taken by prominent lumbermen in that district, prominent among whom is Mr. A. E. Watts, of Wattsburg, B.C., near Cranbrook. Mr. Watts contemplates coming forward as Conservative candidate for Kootenay. Moreover, he apparently feels strongly the need for electoral purity, as he has issued a rather remarkable challenge, backed up by the Conservative Association of Cranbrook, as follows:

"I, A. E. Watts, hereby challenge Sir Wilfrid Laurier, and the "members of the Government, individually or collectively, to put up "funds for the purpose above indicated, and thereby show their desire "that political campaigns shall be conducted decently and honestly, and "that in future they will prosecute offenders, and see that justice is "effectually applied, and thereby cleanse Canada of the foul blot they "have put upon her fair name. To prove my sincerity, and to shield a "part of British Columbia from the shameful stigma, the crying dis-"grace of Canada which makes her appear as a harlot amongst the clean "nations of the earth, I will offer $5,000 reward for information leading "to the conviction and unseating of any member of Parliament that may "be elected in the Kootenays by the aid of bribery or corruption, whether "he be of the Liberal or Conservative or of any other party."

The Conservative Association have endorsed Mr. Watts' attitude in the following resolution:

"That we fully endorse the proposal of A. E. Watts, and recommend "the same for the consideration of all the executives and future candi-"dates for Parliament throughout Canada. That a subscription list "should be opened and the public invited to subscribe to a fund which "shall be held in trust and used purely for the purpose of prosecutions "and rewards for the conviction of any person or persons guilty of "bribery or corruption, or of those who shall be forming pools or betting "on the result of elections, thereby influencing voters, or in any way con-"travening the Act for the prevention of corruption and bribery.

"That the amounts so subscribed if not used, or, if a part only is "used, it shall be returned in proportion.

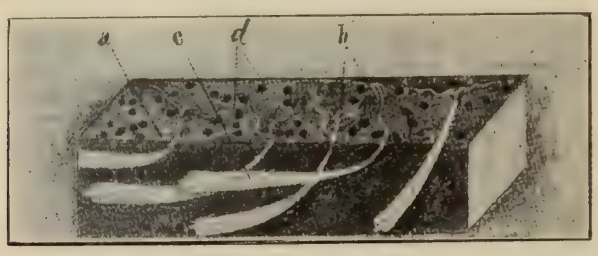
"We believe that the action proposed will have the approbation and "support of a vast majority of the people of Canada, who will thereby "show their determination that the sovereign people, the masters of "politicians, shall rule instead of the ballot box stuffers, thieves and their "employes.

"(Signed)
"G. T. Rogers, Chairman.
"Jos. Ryan, Secretary."

THE TEREDO

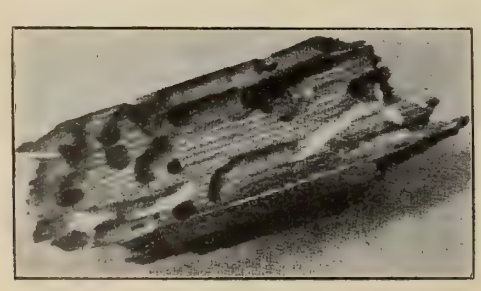
On the Pacific coast during the past summer the depredations of the teredo were considerable and instances were reported of severe losses from the destructive habits of this peculiar worm. The teredo has been the pest of builders and shipowners for ages, and to-day is working destruction as complete as when science was in its infancy. In a recent issue of "The Hardwood Record" appeared the following description of this peculiar creature:

"The teredo is known to have existed for ages, as the remains or traces of his borings are found in fossil and petrified woods, but he first attracted the attention of men about 300 years ago when they began to seek some way to stop him from devouring the wood hulls of the clumsy ships of those days. The field of his operations is as wide as the combined areas of the seas of the earth. He is found in all salt water except the Arctic or Polar regions; therefore, a short illustrated article in regard to this destructive animal will undoubtedly be of some interest to the readers of this paper. The teredo may be hatched from one egg of a billion of the sporadic offspring of the same parent which is hermaphroditic, or of both sexes. They are hardly as thick as a pin at this stage of life and



BLOCK OF TIMBER SHOWING TEREDO'S MANNER OF ATTACK.
a—Foot of Teredo. c—Body of Teredo.
b—Siphon Tubes. d—Holes Through which Animal Enters.

are scarcely noticeable, though they move about in the water with some rapidity, and attach themselves to any wood they may come in contact with and immedigately begin to enter it by boring a tiny hole. The body of the teredo is enclosed in an exceedingly delicate bivalve shell, and they are said to have eyes which disappear as soon as they are buried in the wood, where they spend most of their lifetime, sealed up in this wooden cell. The animal has a foot or soft muscular sucker-like member that protrudes from the body apparently where the head ought to be, and for this reason they are considered acephalous or headless. This foot they alternately attach and loosen from the bottom of the hole and thus adjust and hold the delicate edges of their shell so that by their slight rubbing or rasping movement the cutting or boring is slowly performed. They also have two small flexible tubes or siphons which extend into the water from the small orifice which was made when the animal first entered the log or timber. These siphons are vital organs of the teredo and must at all times be in connection with the water, otherwise death would be immediate. These siphon tubes are sensitive and are extended or drawn in on the slightest disurbance, as are the palps or feelers of a snail.



SECTION OF PINE DESTROYED BY TEREDO.
This piece of pine was taken from the keel of a row-boat destroyed by Teredo navalis at Port Barius, Guatemala.

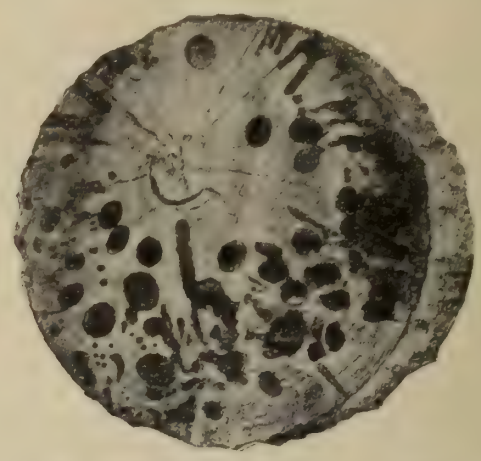
Through one of these tubes the animal takes in food and water and through the other discharges the excrement from his body. At maturity the teredo is cylindrical and worm-like in appearance, and whitish in color. The hole he makes gradually increases in size in accordance with the growth of his body, from the pin-hole on the surface to as much as three-fourths of an inch in diameter at the hemispherical termination where the boring ends. The animal ranges from two or three inches to three feet in length. Of course this is the extreme, and is never attained except in tropical waters, under the most favorable conditions, the average being probably twelve or fourteen inches.

When once inside the wood the teredo grows rapidly, and the size of the cavity in which he dwells is adjusted accordingly so as to fit or conform exactly to the size and shape of the mollusk at all stages of his development. As they proceed they line the walls of their cell with a calcareous or limy secretion, which hardens and protects them from contact with the wood. The end of the hole, however, is left bare to facilitate the boring until the animal has gone as far as he wishes, when this too is sealed over, and his mission so far is completed and he rests for a time, as it were, in a hermertically sealed cell.

There are other changes that now take place in the development of the teredo. The spawning season is at hand, the animal dies and is dissolved and passes out in a fluid state from the small orifice through which he entered and impregnates the sea to produce his kind.

The teredo, although there may be myriads of them, attack the same piece of timber simultaneously, as many as 50 or 75 to the square inch, so crowded together that only a very thin film of wood remains between their adjacent burrows. When they can proceed no farther without boring into the habitation of another, one must stop and cease to exist, and the survivors are enabled by the increase of room to proceed until some of their number are again cut off by their neighbors who have overreached them; and for this reason, the tunnels or tubes become larger but less numerous as they go farther into the wood. They never cross the slightest crack or crevice of any kind, and if the hull of a boat is made of two layers of lumber, the inner one will not be attacked as long as the outer layer remains in place. There is no opening into the animal's cell, save the little speck or opening where he first entered, and these are the only outer indications of his presence, although the interior when opened up may be honeycombed with his borings.

There are many varieties of this destructive pest, and the most heavily infested waters on the globe are the Gulf of Mexico and Caribbean Sea, but they gradually decrease in proceeding northward to the coast of Greenland, where they are unknown. As a destroyer of harbor and dock timber the teredo has no equal. The hardness of the wood in which he works seems to cut no figure whatever with his borings, as he burrows with equal ease in pine, oak or mahogany, not changing his course much to avoid a knot or hard place in the wood, and frequently



OAK PILING BADLY DAMAGED BY TEREDO.
This section was cut from an oak piling removed from the dock at Porto Cortez, Honduras, which was utterly ruined by Teredo after standing in the water two years. The specimen contained some holes fully three-fourths of an inch in diameter.

he perforates the harder woods, such as ebony and lignumvitae, and it has been proven that a certain species of these mollusks, the limpet, burrow their way through rock. The grain of the timber does not affect his course in the least, as he is liable to cut square across it, going through the annular rings or layers at right angles as he passes from the bark toward the heart a of log floating in the water, or he may direct his course downward or lengthwise of the grain as he usually does in a piling or timber standing upright in the water, as the woodwork of harbors or dock, or he may bore through the medullary rays of the wood at any conceivable angle.

At this time the value of cabinet woods has so increased, and their importation from the tropical countries into the United States has become so great that this branch of business bids fair to soon, if it has not already done so, take first place in the commercial interests between this country and our near neighbors to the south. Mahogany is now being brought to the States from the Pan-American countries of the west coast of Africa in quantities far surpassing the ideas of even many well-posted lumbermen. All of this wood comes from teredo infested coasts and the valuable logs constantly being destroyed by this pest is amazing. Much of this waste could be avoided by a better understanding of the habits of the animal. The mahogany is cut far up in the mountains, and is brought down the rivers in small rafts and tied up near the mouth of the river or along the shore in the salt water, where they frequently remain for months unnoticed, an easy prey to the teredo. As these animals have been known to totally ruin mahogany and cedar logs in four months the risk a timber merchant takes in thus neglecting his wood will be readily seen. Logs should be examined frequently if the raft is moored in salt water to await the arrival of a steamer to transport it to the northern markets. They should be turned upside down in a very few days after reaching salt water, for the reason that the teredo will only attack it from the underside or submerged portion, and is killed as soon as this is turned up and dries in the hot sun. A close observer might

examine a whole raft of logs which had not been turned and see no indication from the top side that the teredo was devouring it. The labor and expense of frequently knocking the dogs loose, adjusting ropes and chains, turning each log in a string of rafts and redriving the dogs is an item of considerable magnitude, but it is cheaper to do this than to take chances of losing much valuable timber. When the presence of teredo is found the depth of his boring can be determined by chopping into the log with an axe, and if it is found that they have not gone in deep enough to do much damage, further injuries can be prevented by turning it about one-third over, say once a week, or by rolling it out on to the beach.

Some mahogany cutters think the best plan is to stop all the rafts far enough up the river to hold them in fresh water where they are beyond the reach of teredo, but this plan too has its disadvantages. Usually it is several miles up the river to a point where the water is absolutely fresh, and the ships have to anchor quite a distance out at sea on account of the shallow water surrounding many of the southern ports, and taking it all into consideration it is usually a long distance from the logs to the ship, and a vessel is frequently delayed for an indefinite period of time in getting a cargo of two or three thousand logs aboard under these circumstances. To detain a craft of this kind is quite expensive. Yet I have known ships to lie at anchor longer in loading than the time required to complete a voyage and discharge the cargo at any of our southern or eastern ports. Therefore, it would seem that careful attention and turning the logs frequently is the better and more economical plan. They can then be tied up where they will be in reach of the ship by a a thousand feet or more of tow line and pulled alongside and hoisted aboard by the steamer's winch and tackle, and the time in loading greatly reduced.

All timbers used in and under the water should be protected if they are to last more than a year or so. For centuries the method of preventing the hulls of wooden ships from being destroyed by teredo was to cover them with thin sheets of copper. Piling and timbers driven into the sea upon which the more permanent class of docks were erected were sheathed with copper from a few inches from the water line to several feet below it. Nails driven thickly into timbers were also resorted to as a means of protection. Much experimenting has been done along this line, and as yet no kind of paint, pitch, coal tar, or any chemical preparation applied to the surface of the wood has been found that would repulse them entirely. Even soaking timbers in creosote does not render them entirely impervious to the attacks of teredo. It has recently been demonstrated, however, that naphthaline oils, when forced deep into the pores of the wood, under heavy pressure by mechanical means, render timber thus treated proof against the attacks of teredo, and it is a relief to know that an effective preventive has at last been found against the destructive assaults of these pests.—J. V. Hamilton.

THE UNITED STATES HARDWOOD SUPPLY.

According to the United States Census Bureau the amount of hardwood lumber cut in that country during 1906 was 15.3 per cent. less than in 1899, despite the increase in population. At the same time prices advanced from 25 to 65 per cent., so that the increase would indicate a waning supply rather than a falling off in demand. It is concluded by Assistant Forester W. L. Hall, whose investigations are issued as Circular 116 of the United States Forest Service, that hardwood lumbermen are now "working upon the remnants." The supply, he says, is getting short, and the end is in sight. He estimates further that there are being used 25,000,000,000 feet per year of the various hardwoods, which rate of consumption might give a sixteen years' supply. The soft woods, though also running low, will not give out so soon, as there is a large supply on the Pacific coast. There is, however, no such supply of hardwoods in that area.

Mr. Hall explains the situation thus: "How intensely the whole country would feel the loss of its hardwood timber, to an ample supply of which it has long been accustomed, can scarcely be realized. Without hardwood for building purposes, for railroad ties, for the manufacture of furniture, cooperage and vehicles and for the varied other uses to which it is put, we should be in sad straits indeed. A general failure in crops may affect industrial conditions for a few years—a failure in the hardwood supply would be a blight upon our industries through more than a generation . . .

"The inevitable conclusion is that there are lean years close ahead in the use of hardwood timber. There is sure to be a gap between the supply which exists and the supply which will have to be provided. How large that gap will be depends upon how soon and how effectively we begin to make provision for the future supply. The present indications are that in spite of the best we can do there will be a shortage of hardwoods running through at least fifteen years. How acute that shortage may become and how serious a check it will put upon the industries concerned can not now be foretold. That it will strike at the very foundation of some of the country's most important industries is unquestionable. This much is true beyond doubt, that we are dangerously near a hardwood famine and have made no provision against it."

Mr. Hall recognizes that the softwoods, metals and concrete, have been gradually taking the place of hardwood as the supply of the latter is reduced, and, moreover, that these are continually becoming more popular for various purposes, their adaptation for which was not conceived of a decade ago. However, this has not lessened the demand for hardwood, as there appear to be certain purposes for which no available substitute for wood has yet been discovered. Recognizing this fact, Mr. Hall concludes that the problem can be solved only by maintaining permanently under a proper system of forestry a sufficient area of hardwood land to produce by growth a large proportion of the hardwood timber which the nation requires. This land can be found, he thinks, only in the Appalachian Mountain ranges.

"These mountains," he says, "increased their proportion in the nation's hardwood output from 42 to 48 per cent. during the past seven years. On the principle of using the land for its highest purpose they should further increase their proportion to not less than 75 per cent. Other sections of the country will readily furnish the remaining 25 per cent.

"The mountain ranges from Maine to Alabama should be made to produce the greater part of the hardwood supply, because growing hardwood timber is their most profitable use. There is, in fact, no other use to which the surface of these mountains can permanently be put. That they cannot be successfully farmed has been proved in thousands of cases. For the most part they cannot even be permanently grazed.

"It is in the production of timber that they excell. They bear the greatest variety of species and the best remaining hardwood growth anywhere to be found. Freed from their enemies—fire and unwise cutting—these forests readily reproduce the best kinds of timber. Outside of local areas of the Pacific coast nowhere else is forest growth so rapid. Even land, cleared and farmed to the complete exhaustion of its soil, will in this region in time reclothe itself with forests, if only it is protected.

"Field estimates by counties show that south of Pennsylvania there are in the Appalachians 58,000,000 acres of forest land, practically all of which is covered by hardwood, and over 85 per cent. of which is in a cut-over or culled condition. Including the mountains of Pennsylvania, New York, and New England, it is probably safe to estimate that the entire Appalachian area includes as much as 75,000,000 acres, primarily adapted for hardwood timber. Only a very small part of this is still in virgin growth. By far the greater part of it has been cut over and some of it has been cleared . . . If the Appalachian forests are rightly managed and taken soon enough, they will insure continuously the hardwood supply of the country and do it without exhausting the forest. In fact it can be done so that the systematic treatment will at the same time improve the forest . . .

"Much of the Appalachian forest has been so damaged that years will be required for it to reach again a high state of productiveness. Its present average production is probably not over ten cubic feet per acre per year. The increase would of course be gradual and it would be slow at first. It would be some time before it could average the forty cubic feet per acre used in the above estimate. Until it does we can expect a shortage in hardwood timber. The longer the delay in putting this forest under control, the longer continued and more extreme will be the shortage."

WESTERN TIMBER DEALERS.

The Howard Cole Timber Investment Company, Limited, have been organized under the laws of British Columbia to deal in western timber lands, chiefly in British Columbia. The members of this company have had cruisers out all summer looking up good timber investments, and have already succeeded in securing some very fine holdings. The officers are: President, Howard Cole, Chicago, Ill; vice-president, H. W. Magoon, Vancouver; secretary-treasurer, W. E. Dunwody, Chicago. Mr. Magoon takes up the active management of the company on the coast. All these gentlemen have been closely identified with timber lands and the lumber business in the central American states, Mr. Magoon especially having been all his life connected with the lumbering industry in the State of Michigan. They are also associated in the management of the Mississippi Valley Realty Company, of Chicago and Vicksburg, Miss., owners of extensive timber holdings in Louisiana, Mississippi and Florida.

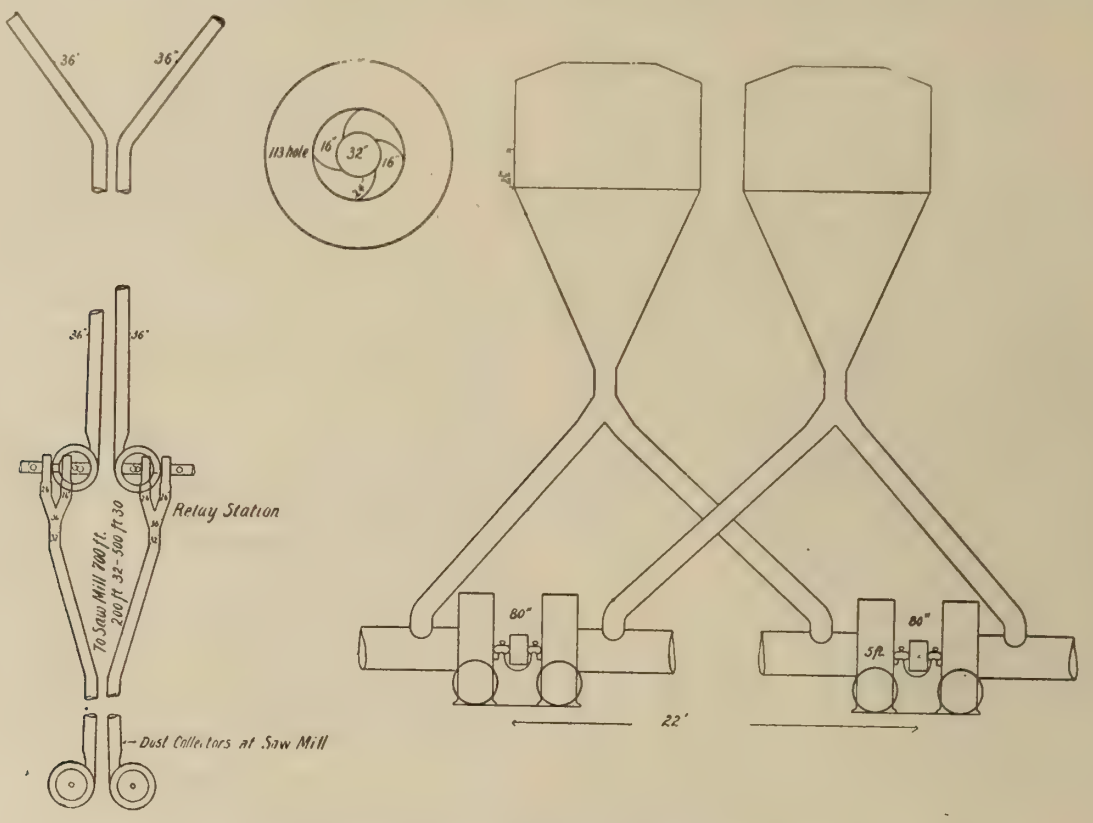
The same gentlemen have also organized, under the laws of the State of Iowa, another company, known as the Columbia Timber Company, Limited. This concern is being registered as an extra-provincial company in British Columbia. It has been formed expressly to carry on logging operations in this province. The president of this company is Howard Cole; vice-president, J. R. Amidon, Cedar Rapids, Iowa; secretary-treasurer, Geo. B. Dutton, Cedar Rapids, and general manager, H. W. Magoon, Vancouver. They have acquired four or five hundred million feet of standing timber in British Columbia, part of which is located on the coast and the balance in the Harrison Lake district. At the latter place they have already commenced logging, having one camp now in operation, while more expect to be started during the coming year. A logging engine for this company is now under construction at the Vancouver Engineering Works.

The business office of both the Columbia Timber Company, Limited, and the Howard Cole Timber Investment Company, Limited, is located in the Hadden Building, 633 Hastings street, Vancouver, B.C.

THE Wood-Worker and Retailer

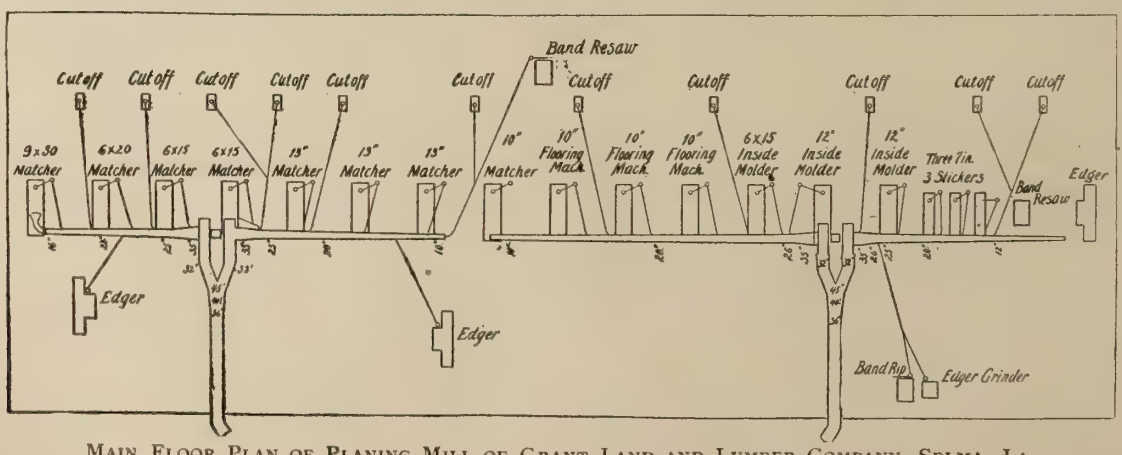
A FIRST-CLASS PLANING MILL.

Herewith is given the ground plan of the very complete new planing mill of the Great Land & Lumber Company, at Selma, La. The power for this plant is furnished by a 26 x 48 inch Corliss engine, driving two 350 kw. generators. With but few exceptions, each machine is driven by a direct coupled electric motor. Two double exhausters, running 700 revolutions per minute, take the shavings from machines



RELAY STATION SHOWING FANS AND DUST COLLECTORS.

and deliver them to a relay station 300 feet from the mill; the relay station has two double exhausters that make the delivery to the power house, 900 feet away. By the use of these large exhausters and slow speed it is estimated that 60 per cent. of the power is saved over ordinary practice. The exhausters are of special pattern. The mill contains eight matchers, three fast feed flooring machines, three inside moulding



MAIN FLOOR PLAN OF PLANING MILL OF GRANT LAND AND LUMBER COMPANY, SELMA, LA.

machines, three one-side moulders, two band re-saws, one band rip saw, three edgers, one circular rip saw and sixteen cut-off saws. The lumber is delivered to the planing mill by electric travelers running on overhead rails, this, it is claimed, being the first known instance, in this country, of such a system being employed to carry stock between the mill and the sheds. There are six lumber sheds, 88 feet wide, their combined length aggregating about one mile.—"The Woodworker."

POWER—STEAM OR ELECTRIC?

It is quite evident to every close reader of trade journals, says a writer in "The Woodworker," that the paramount question to-day agitating the minds of many men standing at the head of large industrial enterprises is, "What shall we use for running the plant?" No doubt the reason why this inquiry has thrust itself to the forefront so prominently is the fact that men have at last succeeded in solving the difficult problem of "harnessing the lightning" and making it subservient to practical ends. This wild and dangerous force, for many centuries so elusive and so mysterious, has finally been subdued and stands now the obedient servant of man. It not alone carries his messages between distant points, but illumines his streets, drives his cars, runs his factories, and in many other ways helps in his industrial pursuits. In fact, the possibilities of this new means of transmitting power are beyond reckoning.

Naturally, then, the question comes up in many quarters, "Shall we adopt this new method, or still cling to the old?" But while this inquiry has become pretty general, and many concerns have decided in favor of electricity, others are to be found who are loath to make the change. All their lifetime accustomed to old methods, with whose worth

and possibilities they are well acquainted, they have become so attached to the "old horse," as it were, that they don't feel like parting with him. He has done them such good service in the past that they dislike the thought of giving up so faithful a servant, and so, as a matter of sentiment, they continue to cling to the old.

Towering over and above sentiment, however, as a hindrance to exchange, is the stern question, "How much is this new method going to cost? Will it be cheaper than the old, and, if not, why bother to make the exchange?" More stumble over this last proposition than any other, perhaps; and well they may, because the item of expense looms up as a vital and important factor in deciding the choice of methods. In these days of keen competition, the cost of production must be kept down just as low as possible, otherwise our neighbor across the street, engaged in the same line of manufacturing, may be able to undersell us.

Personally, the writer stands flat-footed in his advocacy of electricity as a power-transmitting force in woodworking plants, because long years of experience have served to convince him of its incomparable merits. In any discussion of this subject the whole question resolves itself into this simple form, "Does electricity possess any advantages over old methods, and is it as economical?" Now let us look this matter full in the face; let us enter a little into details.

What about the advantages? As compared with shafting and belts, they are certainly numerous and of sufficient importance to merit more than a passing notice. Time and space will not permit me to enlarge upon each of these. All I shall attempt to do in this connection will be to enumerate a few of the most important, believing these will prove sufficient to show the superiority of the electric drive. Just think, for instance, of the availability of electric motors. They are always ready at hand for use, day and night, all the year round. They certainly give less trouble than any other drive, because if your plant is equipped with them you are almost absolutely free from the breakdowns and smash-ups incident to the employment of an engine, with its complicated system of belts.

By means of individual drives these motors can be applied separately to each machine, thus insuring a more even and steady run, as well as resulting in a better grade of work. By means of this same arrangement of motors, each machine can be placed in the most convenient part of the shop, both for the accommodation of the workmen and better handling of materials. Is not this a great improvement on the old shaft-and-belt arrangement? Then, again, as compared with the large amount of space occupied by boiler and engine, motors, whether used for driving groups or individual machines, take up an insignificant amount of room, thereby allowing the entire floor to be used for machines. Last of all, let us not forget that the individual drive, by dispensing with belts and overhead mechanisms, such as shafts, pulleys and hangers, secures more head room, lessens the danger of accident, frees the air from choking dust, and adds immeasurably to the comfort and healthfulness of the place in general.

This, in brief, is a list of the leading advantages accruing from the use of electricity, and no man debating the equestion as to what drive to choose should fail to give these their full weight in forming his decision. Besides contributing materially to the comfort of the workman, they add greatly to the capacity and efficiency of the plant itself. In fact, this truth is fast gaining ground, as the number of plants adopting electricity is constantly on the increase.

It seems that a large proportion of the new planing mills even are installing this drive. Allow me to quote a statement recently made by one of the large electrical companies: "As regards the advantage of having machines driven by motors, we would state that the fact of nearly all new planing mills going up being provided with motor drive, is in itself sufficient indication that true advantages do exist."

Next, let us ask, what about economy? This question, of course, can be answered only in a general way. Local conditions must always be taken into account whenever the matter of relative cost is figured out. Still, speaking in general, it is safe to say that of the two, electric drive is the cheaper. If in a large plant only one drive is installed to run all the machinery, and this is kept running steadily for ten hours a day, just like belts and shafting, there is no doubt but the expense would be excessive. But this expense can be cut down very considerably by resorting to the use of individual motors. These, by being attached to separate machines, furnish the exact amount of power required by each one, and are stopped the instant the machine is through with its work, thus reducing very materially the consumption of current. In this case you pay strictly for the power actually used. By the adoption of this equipment, also, which means an almost total dispensing with belts, shafts and hangers, no inconsiderable saving is made for repairs. Besides, by dispensing with long line shafts, there is a saving, it is estimated, of between 20 and 30 per cent. of the power applied at the driving end.

Of course, the largest item of saving, in the case of those concerns which purchase current from a local electric company, comes by dispensing with engine and boilers, and with the services of an engineer. The cost of fuel and labor, as well as for repairs on engine and boilers, is cut out altogether. Taking all these points into account, it must appear that on the score of economy the palm must be given to electric motors. And the general testimony of those concerns employing this power goes to substantiate this statement. Within the circle of my acquaintance I know of none willing to give up the new to return to the old. As regards merit and cost, they enthusiastically pronounce it the ideal drive.

The only instance we can conceive where it would be inadvisable perhaps to give up steam for the electric current, is in a plant where the refuse from the mill is used as fuel. In that case there is little or no coal bill to pay and refuse is easily gotten rid of. Still, even in such places the superior advantages accruing from motors could be obtained by installing a generator and using the existing engine to run it. By becoming its own producer such a concern could reduce the cost of current to one-quarter or one-fifth what it would have to pay an electrical company for the same. So, rightly looked at, even such a plant would gain much by the installation of this new drive.

In conclusion let us say, the world is moving steadily on, and we shall do well to keep pace with it. Up-to-date equipment ought to be the motto of every woodworking concern, if it desires to keep step with present day progress. That conservatism which dares not try the new, and ever clings to the old, will some day, to its great dismay, find itself left behind in the grand industrial procession. Better far to fall in line, and, if possible, march in the front ranks of progress. To do this means that we avail ourselves of the best products and latest discoveries of human genius.

ALBERT COTTON'S NEW SHINGLE MILL.

Several shingle manufacturing plants in British Columbia were the victims of the fire fiend during the past summer, one of the largest of these being the plant operated by Mr. Albert Cotton, on False Creek, Vancouver. This mill, which, with five shingle machines, had a daily capacity of 125,000 shingles, was completely destroyed by fire on July 13 last.

Mr. Cotton has acquired a new site for his plant, this time on the south side of False Creek, and farther up, being located at the foot of Birch street. The new mill, which is now in course of construction, is showing the result of the long experience Mr. Cotton has had in the manufacture of shingles, the arrangement of the machinery and buildings being designed not only to economize in cost of production, but to so arrange the work of the various employes, that the maximum result may be obtained with a minimum of labor.

The mill building is 32 by 99 feet, and contains six of the latest type Dunbar shingle machines, made by Alex. Dunbar, of Woodstock, N.B. It also contains the necessary cut-off saws, conveyors, etc. This will give Mr. Cotton an output of 150,000 shingles per ten hours.

At one end of the mill, and twenty-five feet away, is the boiler and engine house, a concrete fire wall, being built on that side of the engine house nearest the mill. A novel feature of this construction is that the main shaft of the mill extends across this twenty-five foot space, through the fire wall and into the engine room, where it is belted direct on to the engine. The object of this is to prevent the carrying of sawdust from the mill into the engine room, as in the case where the main driving belt spans the space between the two buildings.

The power plant consists of two boilers and the engine, all of which were saved from the fire in the old mill. The boilers will be supplied by fuel from the mill, the fuel conveyors running immediately under the machines and across to the boiler house, where, by a simple tilting device, the fuel can be fed at the will of the engineer, either direct to the dutch ovens or to the fuel bin.

Another feature of interest regarding these boilers is the fact that the opening immediately above the fire grates, through which the sawdust pours, is considerably higher than is usually the case.

The object of this is that a greater spread may be obtained, the farther the sawdust falls the greater area it will spread over, thereby ensursuring a complete covering of the grates without the need of poking.

The dry kiln is located nearly 100 feet from the mill, and is extra large in size, being 56 feet by 84 feet. It contains four separate tracks which will take care of the output without forcing, thus getting desired results without overheating and thereby injuring the shingles. At one end of the kiln is the track leading from the mill, on which run the trucks carrying the shingles from the packers into the kiln. At the other end is the railway siding, which, being about three feet lower than the level of the kiln floor, greatly facilitates loading operations. All the cars are handled at first hand by the British Columbia Electric Railway Company, one of their frieght lines running along the shore front. From this company cars are turned over to the Canadian Pacific or Great Northern Railways as desired.

MECHANICAL DRAFT.

In a booklet recently issued under the above title by Sheldons, Limited, of Galt, Ont., some of the advantages of mechanical draft when applied to power plants are pointed out. The detailed explanation of the system is accompanied by many illustrations of the complete lines of apparatus manufactured by the firm, together with hints as to their proper method of installation.

THE DEATH OF MR. GEORGE McCORMICK.

The death of Mr. George McCormick, manager of the Canadian Pacific Lumber Company, Port Moody, occurred on October 15th last. Mr. McCormick was very well known in Vancouver, having lived there for thirty years. Previous to that he was in Parry Sound, Ont., which constituency he represented in the House of Commons.

(Continued from page 19)

over forest—at least, the bulk of it. Can there be two opinions as to whether it should manage this property as a permanent investment, or merely exploit it for what is in it, placed there by nature?

A rational policy requires that a distinction be made between the lands that are only fit for timber growing and those which are more advantageously turned to farm use. There will then appear some land to be doubtful as to its classification, but that should be also left to timber-growing, until good reasons appear for settling it, i.e., until the time has arrived when second class farm lands have become profitable and are needed.

Fortunately, timber will grow, though less rapidly, on the poorer soils, which lack in fertility or are physically difficult to farm, and hence there should be no quarrel between farmer and forester.

On such areas set aside for forst growing—forest reservations—the Government should dispose of the timber systematically in such manner as to make sure of a future crop, i.e., practice forestry.

This requirement is bound to bring the Government to a double dilemma, an economic and a political one, namely, how far to consider the present and how far the future, but sooner or later, if the necessity of forestry is once admitted, it will have to choose the one form which points to the future.

Hitherto, the Government has desired to secure an income from the timber before the land was to be settled or else has made the timber a source of income without the settlement in view. I do not use the word revenue, which implies a continuous income. Indeed, the policy proposed of introducing forestry methods means change of the temporary and limitable income into a continuous revenue for ever. Every one of you is financier enough to see, even if you do not realize the exact method, that that cannot be done without some expenditure or without curtailing present income.

This is the economic dilemma; the Government must be willing to forego or spend part of the present income in order to insure a continuous future revenue. I understand it can well afford to do so.

The political dilemma is, how to deal with the timber limit holders, and this, I dare say, is the more troublesome.

I know enough about the situation to recognize, first, that this is a complicated problem and, secondly, that I dare not even suggest the simple solution which the mere student of political economy and statecraft would readily propose, namely, to cut the Gordian not and make an all-round new and square deal.

Present Lease Holders.

There are, if I understand the situation correctly, three classes of limit holders (which may, of course, all three be found in the same person), namely, the limit holders of long ago, those of recent origin under changed conditions of lease, and those of the future. I also understand that, although the Government in the leases granted to the first two classes has reserved the right to change conditions of lease, usage has made this condition nugatory.

There are many objectionable features in these leases, but the worst feature of these earlier leases is that practically they do not terminate, and hence the much-praised ownership by the Government is a delusion, and the Government is apparently debarred from using its property, or having it used to the best advantage. It would appear that as long as any young growth of pine which may grow into timber exists on a limit, this is vested in the limit holder.

Unless, then, the Government can assert its rights and regain full possession of the property, either by adjudication or by compromise, or by imposing new and troublesome conditions for retaining ownership, these lands must be left to fate and the despair of the future.

The hope of the future must be found in the new deals the Government may make with the future limit holder, and this it should do with a full reckoning of the future.

It is needless to add that to carry out such a forest policy technical advice will be needed, and it will be my pleasant task to prepare young men for this business.

The Advantages of University Training.

I have been asked whether the young men graduating from the University in the Faculty of Forestry will be fit to manage forest properties. I rejoin with the question whether you would entrust your life to a young physician just from the medical school. Managers are not made in school, they are either born like the poets, or they develop, as their judgment is developed in contact with realities and concrete things. But the technical knowledge imbibed during their training should stand them in good stead in accumulating and digesting experience, and thus in developing quickly into managers. When leaving the University they will have all the necessary theory, and more than needed for the present. They will have knowledge of woodcraft and they will have come sufficiently into contact with the practical problems of forest management to be useful in developing it.

Our aim will be to turn out men so well grounded in theory that there shall be no question as to their becoming the most practical men in the woods—not excepting the logging boss.

From you, as interested citizens, I hope to receive moral support and active interest in bringing about such a forest policy of the Government, as will give employment to this coming generation of foresters.

The Fire Fiend.

There is one feature of our forest conditions, without reference to which no discourse on forestry matters on this continent would be complete. I have left it to the last in order to make, if possible, a more lasting impression on you and to enlist your co-operation in eradicating it. There is no use talking about forest policies or forestry methods, reforestation and conservative lumbering until we have learned to cope with the fire fiend.

This is almost entirely a moral problem, in which all the people are involved, for the majority of forest fires are due to culpable carelessness—a carelessness quite general on this continent, born of a lack of a sense of civic responsibility. If there were a higher moral tone in the community, a greater care of other people's properties and interests, there would be fewer forest fires. The majority of these fires, I have no doubt, are due to preventable causes.

The origin of fires from locomotives, I believe, could be almost entirely stopped by application of a newly-devised screen, the invention of a Canadian, which overcomes the objections made to screens by engineers. It is applied on the outside of the stack, hence does not interfere with the draft, and is always within view for inspection.

The fire ranger system in use by the Ontario Government is good as far as it goes, but it is by necessity limited. Its development depends, to a large extent, on the desire of the limit holder; but it is often not at all the interest of the lumberman to guard effectively against fire, since the greatest danger from this menace is on cut-over lands and young stands of coniferous timber, in which the lumberman is not financially interested. Its weakest spot lies in the temporary employment of the fire rangers, who, therefore, shift from year to year, and in the fact that they have no permanent interest in the forest. Not until a real forest policy is introduced and foresters, employed all the year on some forest work, become its guardians, will the forest be efficiently protected at a reasonable cost.

THE GILLIES DAMAGE SUIT.

A case of peculiar interest to lumbermen was tried before Justice McMahon in Toronto recently. An action was brought against the Temiskaming & Northern Ontario Railroad by the owners of the famous Gillies limits for damages to the extent of $91,004.75, to cover the cost of forest fires which occurred on the limits in May, June and July, 1905. These, the plaintiffs allege, were started by sparks from the defendants' locomotives. Numerous section men, railroad employes and fire rangers were brought down by both defendants and plaintiffs to give evidence as to the state of the roadbed and of the nature of the traffic.

Mr. John A. Gillies maintained that the right of way of the railway was so littered with inflammable debris, brush, log refuse, etc., that sparks from locomotives could easily fire it. The chief seat of disturbance was in the neighborhood of Latchford, this being on that limit, which, during the silver rush of a couple of years ago, received such prominent mention when prospectors were barred from examining the mineralized portion of this area. Since that time this land had been cleared of its timber and possession taken by the Ontario Government, who have sunk a shaft on the property. The railway now in service on this latter is the one causing the alleged damage.

Mr. John A. Gillies, the principal witness for the plaintiffs, testified that the right of way where the fires started was so covered with debris as to be in an ideal condition to take fire from passing sparks. This was corroborated by various witnesses, who gave graphic testimony as to the damage to timber caused by passing locomotives, despite the fact of a bare possibility existing that other agencies might have also been instrumental in starting fires. Counsel for the plaintiff argued that his client had a legal right to claim damage for fires arising out of the negligent operations of the defendants, arguing that if the commissioners took over the road from the contractor before it was properly fit to be taken over, they also took over all risks of liability with it.

The defence claimed that the dependants, as a Crown Commission, were exempt from claims for damage on the principle that the Crown being impersonal could do no wrong. Against this counsel for the plaintiffs contended that the Commission acted as a railway company under the Railway Act and were not impersonal, as they claimed all the rights and privileges of a corporate body and that it was monstrous to suggest that the Commissioners could commit all manner of depredations and shelter themselves behind the plea that the Crown could do no wrong. The Railway Act gave them all the rights and privileges of a railway company and, when they claimed the privilege of suing they forfeited the prerogative of being above the law. The Crown said in effect: "Let justice be done," and in the pursuit of justice the Crown, acting as a railway company, forfeited its personality and became liable for any damage they might do. It was further contended, backed by a quotation from the Railway Act of 1866, that in timber districts the smoke-stacks of engines must be fitted with screens, of eleven wires each way to the inch. The evidence of witnesses as to cinders "as big as a bean" showed that the engines were negligently defective.

Judgmnt in the case was reserved.

Wanted and For Sale Department

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Advertisements inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. Fourteen lines make one inch Advertisements must be received not later than the 12th and 28th of each month to insure insertion in the subsequent issue

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ABOUT 100 M. PINE—ABOUT 1/5 WHITE pine—can be cut to order. Write for particulars. S. SMITH, Silver Hill, Ontario

WANTED — TEN THOUSAND CORDS Hard and Soft Wood ; also same quantity of Slabs. SIMCOE WOOD AND LUMBER CO., 52 Yonge Street Arcade, Toronto.

WE HAVE FOR SALE A FEW CARS OF cedar posts and shingles, pine lath, clear face and better red pine and a good quantity of white pine and spruce lumber. JOHN HARRISON & SONS Co , Saw and Planing Mills, Owen Sound, Ont.

HAVE YOU ANY STOCK YOU WISH TO SELL? If so make the fact known to probable buyers by placing an advertisement in the "Wanted and For Sale Department." Address CANADA LUMBERMAN, Toronto.

FOR SALE

FIRST CLASS SASH AND DOOR FACTORY and Planing Mill in thriving locality, also lumber business Address BOX 547, CANADA LUMBERMAN, Toronto.

A CROWN LAND SURVEYOR AND Lumber Cruiser of long experience wants to be placed in touch with parties who are desirous of investing in lumber lands in Alberta or British Columbia. Can furnish good references. Address Timber, care CANADA LUMBERMAN, Toronto.

FOR SALE CHEAP

SAWMILL NEAR HUNTSVILLE SITUATED on main line of G.T.R. Also 150 acres of Hardwood bush about one mile from mill. Apply R SIMPSON, Waterdown, Ont.

SPRUCE AND MAPLE FOR SALE

50,000 FT. 1" SPRUCE AND 100,000 FT. 1" Hard Maple, all nice dry stock: prices on application. Box 544. CANADA LUMBERMAN, Toronto.

FOR SALE

No 1 Spruce Lath 4' x 1½" x 3/8".
Spruce 3 x 4, 3 x 5, 3 x 6, 3 x 7, from 1 to 5 cars of each
Also 3" Fourths and 3" Ends.
BOX 64, BATHURST, N B.

POSITION WANTED

YOUNG MAN, THOROUGH EXPERIENCE in lumber business, as salesman, yard factory and office manager, and well known to Toronto trade, wishes position. Salary, commission or share of profits. Best of references. Box 545. CANADA LUMBERMAN, Toronto.

FOR SALE

I AM PREPARED TO DELIVER F.O.B. cars here 2,000,000 feet cedar logs cut to order into any size timbers from 4" x 4" to 12" x 12", and from 8 to 20 feet long, any time up to next May; 3,000 telegraph poles. Correspondence solicited. J. B. WINLAW, Winlaw, B.C.

FOR SALE

ONE CIRCULAR SAW MILL, NEARLY new, only run two seasons, steam feed, capacity 25,000 feet, together with horses, sleighs, waggons, camps and this season's cut of logs and lumber; 4,000 acres timber land, which will keep mill in stock for four or five seasons. Mill situated on lake ¼ mile from Widdifield Station. Good going firm, good reasons for selling. Mill can now be seen in operation. For further information apply PARKS BROS., Widdifield, Ont.

FOR SALE

A GREAT MANUFACTURING SITE FOR Pulpwood Mill or large Saw Mill; with excellent large water power already developed. Also complete saw mill and planing mill with about four million feet of lumber, shingles, lath, dressed lumber. Complete outfit of Lumber Camp for about one hundred men; and the most attractive town site in New Ontario. Situated in the Town of Charlton. Good time to get at bottom price. Apply Box No. 1, New Liskeard, Ont.

FOR SALE—SAWMILL AND TIMBER Limits, Mill on lake, in good running order, capacity 15 M.; three saw edger, trimmer, log jack, horses, sleighs, lumbering tools, &c , 2,000 acres of timber, Hardwood, Hemlock, Spruce and Balsam, on boundry between Muskoka and Parry Sound; Good new house, barn, office and blacksmith shop, also ½ million ft. Birch and Hemlock Lumber, With or without Lumber. Good reasons for selling. Apply BOX 546, CANADA LUMBERMAN, Toronto.

WANTED

POSITION AS BOOKKEEPER BY CAPABLE young man, with three years' experience in lumber office. Best of references. Address Box 347, CANADA LUMBERMAN, Winnipeg.

FOR SALE—60 M 4/4 HARD MAPLE. 11 M 6/4 Beech. 6 M Birch and Elm Turning Squares. 9 M 4/4 Birch. 6 M Hardwood Hearts, Squares. O. B. cars, Wiarton, Ont. A. P. EBERT, Wiarton, Ont.

SAWING CONTRACT

WE ARE OPEN TO CONTRACT FOR CUTting of lumber by the thousand in any quantity from one million to one hundred million feet.
SOUTH RIVER LUMBER COMPANY., Limited
South River, Ont.

FOR SALE

SAW MILL MACHINERY
Ten by Sixteen Engine.
Forty-six inch Boiler.
Circular Saws.
Belting, Shafting, Carriage.
Planer and Shingle Mill
Seven Hundred Dollars for quick Sale.
Box 87, Aurora, Ont.

FOR SALE

IN ONTARIO

42,000,000 feet as follows:

1,000,000	Feet	Ash and Elm
2,000,000	"	Cedar
3,000,000	"	Hard Maple
6,000,000	"	Pine
8,000,000	"	Birch (yellow)
10,000,000	"	Spruce and Balsam
12,000,000	"	Hemlock

Easily accessible. Address M. M. HEDDEN, Box 35, Buffalo, N. Y.

TENDERS FOR

Pulpwood Concessions

TENDERS WILL BE RECEIVED BY THE undersigned up to and including the 16th of December next for the right to cut pulpwood on certain areas tributary to the Nepigon River, in the District of Thunder Bay, and Rainy Lake, in the District of Rainy River, and make the same into paper. Tenderers should state the amount they are prepared to pay as bonus in addition to such dues as may from time to time be fixed for the right to operate a paper making industry on the areas referred to Separate tenders must be made for each area or territory, and the successful tenderers will be required to erect a mill or mills on each of the territories or in such other localities as may be approved by the Government of Ontario.

Parties tendering for the pulpwood rights shall accompany their tenders with a marked cheque for 25% of the amount tendered, payable to the Treasurer of Ontario, and to be forfeited in the event of their failing to enter into agreements to carry out conditions, etc

With respect to the Rainy Lake Pulp Concession, tenderers will be required to make a tender for the right to cut the pine, tamarac and cedar on the territory offered. Parties making tender for these timbers to state the amount they are prepared to pay per thousand feet B.M. as bonus in addition to Crown dues of $2 00 per thousand feet B M A marked cheque for $5,000 00 payable to the Treasurer of Ontario, must accompany the tender for pine timber, and to be forfeited in the event of their failing to enter into agreements to carry out conditions etc.

No timber shall be cut on either of the Concessions of a less diameter than 9 inches, 2 feet from the ground.

The successful tenderers to enter into agreements with the Government for the erection of the mills, expenditure of money etc.

For full particulars as to the conditions, etc. application should be made to the undersigned.

HON. F COCHRANE,
Minister of Lands,
Toronto, Oct. 16th, 1907. Forests and Mines

N. B.—No unauthorized publication of this notice will be paid for.

WANTED

CASH PAID FOR BASSWOOD, ASH, PINE and hemlock and other lumber. Send list of what you have and prices to Box 551, CANADA LUMBERMAN. Toronto.

WANTED

BY THE THOS. W. FLETT LUMBER CO , Limited, of South Nelson, N.B A Second-hand Resaw, Saw, Band Saw Write stating price and make South Nelson, N B.

FOR SALE

We have for sale at Sarnia, Ont., a large and fully equipped sawmill—everything in fine condition. Send for full particulars.

BAND MILLS.

McDonough L.H., wheels 9' x 12."
McDonough R.H , wheels 9' x 12."
Stearns R.H wheels 9' x 12."
Prescott L.H., wheels 8' x 10."
Prescott R.H., wheels 8' x 10."
Giddings & Lewis R.H., wheels 8' x 12."
Allis L H., wheels 8' x 12."
2 Prescott R.H., wheels 8' x 12."
Wilkin L.H., wheels 8' x 9."

CARRIAGES.

Phoenix R.H , three-block, 44" opening.
Prescott three-block, 36" opening.
Allis L.H., No. 0 two-block, 52" opening.
Wilkin R.H., two-block, 48" opening.
Prescott L H., two-block, 40" opening.
McDonough L.H., two-block, 46" opening.
Allis R.H. No. 1 two-block, 46" opening.
Prescott two-block, 44" opening.
L H., two-block, 42" opening.
Filer & Stowell R.H., two-block, 40" opening.
Garland R.H., two-block, 40" opening.

EDGERS.

72" L.H., Prescott gang edger.
72" R. or L.H., six-saw Williams & White.
66" R H., four-saw, McDonough.
60" L.H., five saw, Prescott.
62" five-saw Rodgers.
60" R. or L.H., six saw, Williams & White.
56" L H , five-saw, Diamond Iron Works
53" five-saw Allis double.
38" R.H., three-saw, Three Rivers.

LOG TURNERS, LOADERS, ETC.

12" & 14" x 6' Wickes steam nigger, NEW.
8" & 10" x 6' steam nigger, NEW.
Kline three-arm log loader 10" cylinder, NEW.
Kline 2-arm log loader, 10" cylinder.
Kline 2-arm log loader, 8" cylinder, NEW.
3 Kline 2-arm log loaders, 8" cylinders.
Center deck kicker, friction and gear driven.

FEEDS.

12" x 16" Beck Twin engine rope feed.
10" x 36' Garland steam feed
10" x 32' Prescott Steam feed.
10" x 16" Filer & Stowell twin engine rope feed.
10" x 12" Union Iron Works, twin engine rope feed.
9" x 16" Bartlett twin engine, rope feed.
12" x 24" Clark Bros., three to one steam and wire rope feed.
8 3/16" x 36' steam feed.
Phoenix friction rope feed works.

LOG HAUL-UPS.

Friction and geared log haul-up with about 200 ft. of chain.
Single geared log haul-up with about 70 ft. of chain
Single geared log haul-up with about 250 ft. of haul-up chain.
Bull wheel rig.
300 ft. 1⅛" x 6" long link chain, NEW.

LATH MACHINERY.

Wickes "type B," lath mill and bolter
Wickes "type A " lath mill and bolter, NEW.
Wickes "type A." three-saw lath mill, NEW.
Lath binder and trimmer with 2 saws, NEW.
All in stock for immediate shipment.

Send for complete monthly stock lists of saw and planing mill equipment, also boilers, engines, pumps, etc.

WICKES BROTHERS.
Saginaw, Mich.
Seattle, Wash office
412 Oriental Bldg.

FOR SALE

2,000,000 FT. WHITE AND RED PINE AND Spruce; 500,000 Laths P. O. Box 52, Chapleau, Ontario.

WANTED—6/4" AND 2" C. & B. BASSWOOD, Black and White Ash, Rock Elm and Beech; 1" and 5/4" Cull Basswood and Spruce. 2½" Birch C. & B. R. E. KINSMAN LUMBER CO., Limited, Hamilton, Ontario.

FOR SALE CHEAP

NEW SAW MILL 18 TO 20 M. CAPACITY, modern throughout, Price for quick sale $1,150, must be sold address "MILL" CANADA LUMBERMAN, Toronto

WANTED

MAN WELL POSTED IN RETAIL LUMBER Business. Must be able to figure bills from Plans, etc Apply with references to JOHN PIGGOTT & SONS, (Lumbermen) Chatham Ontario.

LUMBER WANTED

WE WANT 100 CARS OF LUMBER EACH week to Dress and Match, resaw, make into flooring, in transit We have the best American Machinery, and guarantee satisfaction. TAIT-CARSS LUMBER CO , Orillia.

WANTED AT ONCE

PORTABLE SAW MILL TO BE IN FIRST class order, Engine, at least 75 Horse Power; Boiler, at least 90 to 100 Horse Power; Boiler to stand 150 lbs. cold water pressure, and be in good condition thereafter. Edger and Trimmers, with Shafting, Belts, etc. State lowest cash price f.o.b car shipping point. Apply Box No. 355 CANADA LUMBERMAN, Toronto, Ont.

TIMBER LANDS

WE HAVE FIVE HUNDRED MILLION standing pine, spruce, cedar, hemlock; large, modern mills building; capital needed; small investors protected; safe mutual plan; don't leave money idle; it can earn fifty per cent. COLUMBIA MUTUAL LUMBER CO., 998 Ellicott Square, Buffalo, N.Y.

Lumber Business for Sale

OWING TO THE DEATH OF THOMAS L. Buller of Ridgetown, the Lumber Business, Premises, Mill, etc., are for sale. This is a rare opportunity, everything is in first-class shape. It is a going concern and a very profitable business. Investigation solicited. For particulars apply to L. J. REYCRAFT, Barrister, Ridgetown, Ont.

FOR SALE
AT MIDLAND, ONT.

416,000 ft. 4/4 x 4" and up, Common White Pine.
20,000 ft. 5/4 x 4" and up. " " "
41,000 ft. 5/4 x 4" and up, No. 1 Mill Culls White Pine.
45,000 ft. 8/4 x 4" and up, No. 1 Mill Culls White Pine.
925,000 ft. No. 1 White Pine Lath, 4 ft.
425,000 ft. No 2 " " " 4 ft.
360,000 ft. No 3 " " " 4 ft.
Your inquiries solicited.
MERSHON, SCHUETTE, PARKER & Co.,
Saginaw, Mich.

FOR SALE

COMPLETE OUTFIT OF MODERN machinery for the manufacture of
Hardwood Flooring.
Beliot Pattern Flooring Machine.
Hoyt Pattern Matcher.
Fay Egan Double strip surfacer and planer.
Fay Egan Band Rip Saw machiner. 4" saws can also be used as re-saw.
Sherman End-Matcher and Boring machine.
Broken Roll Single Surfacer.
Buzz Planer, Turning Lathe, Etc.
All the very latest style of tools and in good order Practically new. Apply to J. S. FINDLAY, Owen Sound, Ontario.

FOR SALE

200 M 1 x 4 and up Spruce Boards
100 ,, 2 x 4, 2 x 6, 2 x 8 Spruce
500 ,, Pine, 1 in., 1½ in. and 2 in.

APPLY TO

THE J. B. SNOWBALL COMPANY, LIMITED
CHATHAM, NEW BRUNSWICK

CURRENT TRADE CONDITIONS.

Ontario.

"The slackest week in all my road experience" was the statement of a prominent lumber salesman in speaking of the trade of the past two weeks. In fact the effect of the general depression in trade has been more than usually felt in Ontario lumber circles and practically no orders are being booked. Dealers have begun to consider it a compliment when a stray order comes along, and even for the jobber an order cannot even be considered a compliment. If a retailer does condescend to purchase an occasional car of material it is generally of some odd size which he specifies as succinctly as if it were worth its weight in gold. Then, too, the chances are that the jobber hasn't the specified size and must order from a wholesaler at rates which make the transaction a simple "swapping of dollars," as one dealer expressed it. The fact of the matter is that the retailer is not even now buying what he needs. In many cases he is cleaning up every available stick of material in his yard—2 x 12's are becoming 2 x 6's or 2 x 4's, and even boards and planks are conspiring with the rip saw to keep down orders.

At the same time prices remain unchanged. Of course, for the sake of doing a little business, jobbers are accepting orders below current rates, but such price cutting is harmless and cannot be accepted as a criterion for announcing a general drop in prices. Retailers as well as wholesalers are satisfied that no such drop can take place and are simply not buying because they can't get the money. They can obtain no credit and consequently can afford to give none.

As the season advances the falling off in the cut for the coming winter becomes more pronounced, and it is conceded by those who know that for the coming winter the amount of hemlock taken from the woods will not total more than 60 per cent. of that for 1907, and the cut of pine will aggregate but little more. In fact so scarce is money being found for logging operations that one or two instances are reported where parties desirous of operating have offered special rates for their cut en bloc, provided the purchasers will advance money during the operations. A case is reported of a block of 3,000,000 feet having been offered for $14.50 on condition that the purchasers periodically advance money during the winter. Such a cut in price seems incredible in view of the expense at which operations will be conducted this winter, as no man can sell hemlock at such figures and steer clear of actual loss. Taking into consideration the present scarcity of available stock and the small cut that will have to supply the trade next season, it has been affirmed in more quarters than one that an increase of $2 per thousand is not at all unlikely to go into effect for hemlock next spring.

Hardwoods are just now unusually quiet, and very little indeed is changing hands.

Eastern Canada.

It is expected that many of the eastern saw mills will finish the season's sawing during the next three weeks. The manufacturing of lumber will, after that date, be a dead letter until late in May or early in June, 1908. This condition of affairs is due to the fact that, during the past spring the St. John River was driven clean. The consequence is that every available log will be sawn when the mills close down at the end of November. The first logs to reach St. John next year will be the "bank logs," which are cut in the lower counties and along the nearby small branches of the St. John. These "bank logs" are usually very high in price, owing to the fact that they are early on the market and come at a time when logs are usually scarce, but next year the chances are that the price will be much lower than usual.

Contracts are being made at low figures this fall, and the lesser inducement will no doubt curtail the supply. These logs are usually available about mid-May. The up-river logs do not begin to arrive until about the middle of June. Thus it will be seen that there will be little offering at St. John in the way of lumber, after the present stocks have been disposed of, before the period mentioned above. A feature of the situation is the continued uniformity in the prices of spruce lumber for export to Boston, New York and vicinity.

In the "American" long lumber trade the lack of snap which has been the most prominent characteristic for some months past is still conspicuously present. Local stocks in this line are very light—from one-half to three-quarters of a million superficial feet would cover the available quantity. An enquirer would be quoted on this line of goods $17.50 to $18 on 10's and 12's; $16 on 9's and $12.50 to $13 on 6's and 8's, f.o.b. schooner, St. John.

Spruce boards show little sign of life. Several local manufacturers are carrying fairly heavy stocks, but not more so than is usual at this time of year. A prospective customer would be asked from $14 to $14.50 per thousand, f.o.b. schooner, St. John, for non-dutiable goods.

Spruce lath continue very uniform. The trade at present shows little prospect of change in price. Locally, lath are rather scarce for this season; the holdings of St. John dealers would total no more than two millions. For dutiable goods, $2.25 per thousand, f.o.b. St. John, would be the probable quotations.

Western Canada.

Whether or not lumber is going to drop is a question agitating the lumbermen of the West just now. The prairie dealers answer unhesitatingly in the affirmative and base their conclusions on the experience of past seasons, when, with the slackening trade in the fall, millmen were obliged to reduce prices to procure business. Imbued with this idea retailers in the provinces are waiting patiently for a slump, and in the meantime are ordering nothing. They are satisfied that the coast mills are pretty well filled up with stock which they will presently be glad to part with at a sacrifice.

Not so the millmen. They see no prospect of falling prices. They claim to have comparatively light stocks. During the summer the amount of material passing into consumption was fairly satisfactory and now the fine weather has continued so much later in the season than usual that supplies are small. The foreign trade for lumber has also assumed interesting proportions during the past summer — orders from Mexico, Australia and New Zealand being handled by many of the mills. Millmen say that the aggregate stock of material in the coast yards suitable for the prarie trade is barely forty million feet. In the meantime the returns from the crops are proving satisfactory and renewed confidence in the financial situation in the West will eventually restore trade to its accustomed status.

The United States.

The Chicago white pine market is said to be showing unabated strength. Stocks in the yards have been allowed to dwindle to unusually small proportions, and available stocks are small indeed. The only weakness in the market is on the sizes and grades used in car building. Inch stock of all grades is in strong demand. In New York the demand for white pine is described as slow, but prices remain firm. In Buffalo the situation is more interesting, but the consumer is buying sparingly.

Hemlock is in more than the usual demand just now in most of the larger centres. In Chicago prices are reported more even than they have been for some time past. Spruce is less steady in price. When good sized orders are under consideration prices tend to fluctuate.

The shingle market is quiet indeed. The country yards are ordering very little, and the car shortage in the West is holding down stocks to a minimum. New Brunswick shingles are somewhat better, but the demand all round is weak.

Great Britain.

According to "The Timber Trades Journal" there has been a noticeable revival of interest in the lumber market of late, those in the country districts who have hitherto refrained from buying excepting from hand to mouth beginning to realize that they may have held off too long. These find that now they cannot hope to buy at prices current a few weeks ago. Especially in Canadian spruce deals is this said to be the case. If this condition continues to prevail there is hope that the spruce situation will speedily right itself and that normal conditions will once more prevail. In Canada many of the spruce mills will shortly cease sawing, and the manufacturing of lumber will be practically nil till next spring. By that time there will be little offering for the British or any other market, and stiff prices will be in order.

C. A. LARKIN

WHOLESALE LUMBER

Shingles, Lath and Cedar Fence Posts.

TORONTO ONTARIO

DRY STOCK READY FOR QUICK SHIPMENT

2 cars 1 x 18 to 23" panel and No. 1 Poplar.
6 " 1" 1st and 2nds Poplar.
6 " 1" No. 1 common Poplar.
6 " 1" No. 2 " "
8 " 1" mill cull Poplar.
2 " 1 x 18 and wider panel and No. 1 Cottonwood.
5 " 5/4 No. 1 common Cottonwood.
15 " 1 x 13 to 17" box boards Cottonwood.
20 cars 1 x 8 to 12" box boards Cottonwood.
19 " 1 x 13 to 17 1st and 2nds "
21 " 1 x 13 to 17 No. 1 common "
20 " 1 x 6 to 12" 1st and 2nds "
15 " 1 x 4" and wider No. 1 common Cottonwood
20 " 1 x 4" and wider No. 2 " "
15 " 4/4 1st and 2nds plain red or white Oak.
24 " 4/4 No. 1 common plain red or white Oak.

AMERICAN LUMBER AND MANFG. CO., PITTSBURGH, PA.

Campbell & Carman

New Brunswick Cedar Shingles, Ontario Cedar Shingles, Douglas Fir, Lath, Fence Posts, Yellow Pine, All Hard and Soft Woods

1523-24 Traders Bank Building. Toronto

Telephone main 5299

∴ WE WANT TO BUY ∴

1½", 2" and 3" Rock Elm, 1sts and 2nds.
", 1¼", 1½" and 2" Chestnut, "
", 1¼", 1½" and 2" Butternut, "

THE McLENNAN LUMBER CO., LIMITED, MONTREAL, QUE

A RE-ASSURING OUTLOOK.

Mr. H. H. Spicer, manager of the Export Lumber & Shingle Company, Limited, has recently returned to Vancouver from an extended trip throughout the Prairie Provinces. Speaking of conditions there, Mr. Spicer said that with regard to the crops, from observation, and from what he had learned from those competent to speak, the return for this year's crop will fully equal that of last year.

"Of course," said he, "there are some localities that are pretty badly hit with hail and frost, and it will bear hard on such. Others, again, are more fortunate. In fact it is said that the crop of Southern Alberta this year is even better than last year's. Northern Alberta, ohwever, was more unfortunate, a heavy snowstorm occurring there on September 10th, followed by several days of freezing weather, consequently most of the grain was more or less frost bitten. The frozen grain, however, will be good for feed, and as Swift's are erecting a large packing house at Edmonton, there will be a good market there for feed for the stock.

"Lumber stocks are heavy in all towns I visited, excepting two or three on the main line of the C. P. R. I also noticed that on account of the tightness of money building in both the towns and cities has been checked. Trade with the farmers has been light, on account of the late spring and the inability of the farmers to pay cash for material, and any notes the lumber dealers may accept from the farmers are not negotiable at the banks.

"It is considered by those who know, however, that trade will be good next spring. Everybody has been curtailing and economizing since midsummer and it is almost inevitable that building operations will increase next spring.

"The retail dealers on the prairie are not looking forward to any reduction in price—in fact, they are so heavily stocked now at the present list prices it would not be to their best interest to have a drop in prices."

WORRYING THE LUMBER COMBINES.

Western Canada is hot on the combine trail. The Manitoba Government will now endeavor to prove the existence of an illegal understanding among certain lumbermen in that province. The action has arisen over the alleged refusal of the Rainy River Lumber Company, which has offices in Winnipeg, to sell lumber to James Overend, of Ninette, Man., on the alleged ground that he was not a member of the Lumbermen's Association. Action was entered in the civil courts by Overend against the Rainy River Company for damages for breach of agreement. Information has now been laid by Chief E. J. Elliott, of the Provincial Police Department against the same company and also against Jay Spencer and others, on the ground that they have conspired to illegally control and enhance the price of lumber.

The hearing of the charges against the Alberta Retail Lumber Dealer's Association, held over from September 19, was resumed before Inspector Worsley at Edmonton, October 4. Mr. Woods, Deputy Attorney-General, again conducted the prosecution, R. B. Bennet appearing for the lumbermen. Mr. Woods desired to place in the witness box Mr. Clark, against whom the case is at present being pressed. In view of that gentleman's position as defendant, however, this was impossible. After the examination of a couple of witnesses, the case was adjourned until October 29, in order to allow certain documentary evidence to be brought from Winnipeg.

The North Arm Lumber Company, Limited, have opened up offices in Rooms 9 and 10, Empire Building, Hastings street, Vancouver. The company expect to have their shingle mill and one of their saw mills at Eburne completed and running by December next.

TELEGRAPH POLES WANTED

We buy all lengths in lots of 500 and up delivered at R. R. siding

Write us for prices and you will see that by cutting your cedar into poles it will net you more than you can get out of it in any other way

J. B. FARWELL & SON
BANCROFT, ONT. RENFREW, ONT. OSWECO, N.Y.

McPHERSON & FULLERTON BROS.
Timber and Real Estate, Victoria, B.C.
FOR SALE.—40 miles of timber on Quatsino Sound Cruiser's report goes twenty thousand feet to the acre or better; mostly Spruce, Hemlock and Cedar. Can be bought for $1.25 per acre, purchaser pay licences.
Write us for particulars as to largest and best timber proposition on Coast. We have timber for sale in all parts of British Columbia.
Victoria Real Estate is a good buy.

Planing and Matching
—IN TRANSIT—
S. POMEROY, Orillia
PLANING, MATCHING, RESAWING, SIDING, FLOORING, MOULDINGS
in Car Lots.
Factory near Station. Write for Prices.
'Phone 113

McLennan Timber Lands and Lumber Co., Limited
Selling Agency and Dealers in all Kinds of
TIMBER LANDS
OFFICES } Gazetteville, N. Y.
} Quebec, 138 St. Peter St.

FOR SALE
TIMBER LIMITS:—17 claims, 75% Cedar, east coast Vancouver Island, on water, cruising 25 M. to acre, $3.25 per acre.
TIMBER LIMITS:—50 claims, Alberni, on water, cruising 22 M., $2.00 per acre.
LESLIE AND CRAWFORD,
11 Flack Block - VANCOUVER, B. C.

Two Dollars
Pays your subscription to the Semi-Monthly CANADA LUMBERMAN for
One Year

A. F. Holden, Pres. J. M. Diver, Genl. Mgr
F. H. Goff, Vice-Pres. E. C. Barre, Ass't-Mgr
The Cleveland-Sarnia Saw Mills Co., Limited.
Manufacturers and Wholesale Dealers in
TIMBER LUMBER AND LATH
Special Bills Cut to Order in White Pine and Norway, any length from 10' to 60' long.
SARNIA, ONT.

THE IMPERIAL LUMBER CO. LIMITED
Mills: LATCHFORD, ONT.
Branch Offices: Manchester, Eng. North Tonawanda, N. Y.
Specialties: **GOOD SIDINGS, WHITE PINE, HEMLOCK**
TORONTO - - - ONTARIO

MASON, GORDON & CO.
80 St. Francis Xavier Street - MONTREAL, QUE.
WHOLESALE **LUMBER and TIMBER**
Car and Cargo Lots Only
Specialty: Dimension Timber in DOUGLAS FIR, PINE, HEMLOCK, SPRUCE, YELLOW PINE or OAK.
Correspondence Solicited.

Geo. Gordon & Co.,
Manufacturers of RED and WHITE PINE
Band - Gang Circular **LUMBER AND LATH**
CACHE BAY, Ont.
C. P. R. 26 miles West North Bay

SPRUCE
1x4, 5 & 6 x 10/16 ft. Spruce Flooring
N. B. Cedar Shingles
Spruce Lath
EVERYTHING IN SPRUCE
Campbell-MacLaurin Lumber Co.
LIMITED
Board of Trade Building, Montreal

Christy, Moir Company
MANUFACTURERS AND WHOLESALERS OF
LUMBER
SPRUCE - SPRUCE
Always in the Market for Mill Cuts Always for Sale
149 Broadway, NEW YORK

THE CANADA WOOD SPECIALTY Co., Limited,

MANUFACTURERS:

Lumber, Hardwood Flooring, Handles, Poles, Bed Frame Stock, Cheese Box Hoops, Heading, Baskets, Etc. . .

Write, Telegraph or Telephone your orders

Orillia, Ont.

AMOS J. COLSTON

Hochelaga Bank Building.
QUEBEC

Pine and Spruce Lumber, Dressed, Matched or Rough. Pulpwood, Railway Ties, Box Shooks, Hardwood Flooring, bought and sold. Accountant, Auditor, Liquidator, General and Real Estate Agent.

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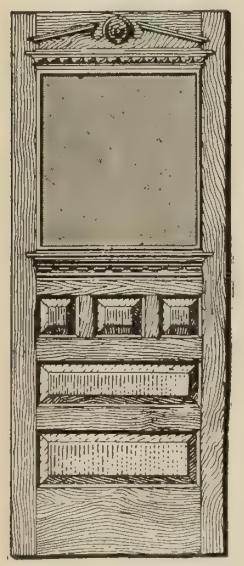
Wolverton & Co.

Nelson, B.C.



THE DEWEY DOOR

MADE BY THE

Cranbrook Sash and Door Co.

MANUFACTURERS OF

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INTERIOR FINISH
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BRACKETS

DETAIL WORK A SPECIALTY

Lumber-Lath-Shingles

Shipments in Straight or Mixed Carloads

ADDRESS

CRANBROOK, B. C.

MAKING CLOTH FROM WOOD PULP.

In the perfection of methods for the manufacture of yarn and cloth from wood fibre there has been found another use for Canada's great store of raw material. The process and its results are dealt with in a report by an American Consul in Saxony. The new material is called "Zylolin" and is a yarn made from paper pulp. The cellulose fibre is converted into flat strips and spun on specially constructed machinery. The strips are sometimes spun alone, but when special strength is required they are spun around minute cotton threads comprising two to five per cent. of the material used. It is stated that the resultant yarn can be produced much more cheaply han that ordinarily made from shoddy or cotton waste. A fabric made of the new yarn can be laundered repeatedly without injury. To prove this an instance is cited of a piece of white cloth being placed before the door of a busy office and tramped over for two years. During that time it was washed fifty times and still survived, apparently not much the worse of wear.

So far as can be ascertained from the manufacturing mills the labor of producing one kilogram (2.2 lbs.) of wood yarn is three pfennigs (four pfennigs about equal one cent), while in Bohemia it is slightly less. The paper yarn itself is sold wholesale at eighty pfennigs, or nineteen cents a kilogram, whereas the cheapest cotton yarn available for the textile industries in the same neighborhood is 2.4 marks, or fifty-seven cents, a kilogram—just three times the price. A spinning machine for producing medium numbers of "Zylolin" has from seventy-two to one hundred spindles; two thousand spindles can produce six thousand kilograms (six long tons) of the wood yarn in one day. For about two thousand marks $476) a machine up to one hundred and twenty spindles can be built for the spinning of "Zylolin." This yarn can be woven into almost any fabric, such as dress materials, tents, bathing suits, imitation Panama hats, carpets, and grain bags. In Germany there are now two mills producing together 10,000 kilograms (10 long tons) of "Zylolin" daily. One large manufacturer, after obtaining unequivocal results from the new yarn, placed an order for 300,000 kilograms (300 long tons) for his carpet mills.

The purposes to which paper yarn can be put are really so diversified that it is sufficient to circumscribe its field of usefulness. The industry has now well passed the experimental stage but is, however, of such recent development that the paper or wood cloths are not generally found in the retail stores, or at least advertised as such. The new process certainly has interest for Canada in view of her vast pulpwood resources and because of the fact that already steps are afoot to conserve her timber resources from ruthless exhaustion.

COST OF FOREST PLANTING.

The cost of forest planting by the Pennsylvania Railroad, says the "Engineering News," appears to be so moderate as to warrant the hope that similar forestry work will be carried out by many individuals in the near future, as well as by railway and other corporations. The greatest drawback to forest planting is the long period that must elapse before any return on the investment will be received. There are possibilities of forestry revenue, however, well within the life expectancy of a young man or even one of middle age, especially if trees suitable for railway ties, fence posts and like purposes not demanding large timber are planted. As a result of organized effort, Mr. Sterling, forester of the Pennsylvania Railroad, has reduced the cost of planting seedlings by nearly half, bringing it down in 1907 to an average of $11.29 per thousand, or $15.93 per acre, for both the seedlings and the labor. This, of course, was for work on a relatively large scale, involving nearly a half million seedlings; but the work was somewhat scattered and was done under other conditions not wholly favorable.

LUMBERMEN'S SNOW PLOUGHS.

At this season of the year the question of snow ploughs is of interest to all lumbermen who engage in woods operations. The Wilkinson Plough Company, of Toronto, have a most efficient machine in their Brazel patent, which is described in their catalogue and supplement thereto. The supplement describes their Combination Model lumberman's snow plough, which is built on similar lines to the 1906 but with longer centre section, so that the plough can be used with or without rut cutter. The plough operates very easily. The adjusting wheels are all close together, and the plough can be arranged for light or heavy work in an instant. The price of the snow plough complete with rut cutter is $265; without rut cutter, $210.

A NEW CANADIAN SPRUCE.

A new spruce from the Canadian Rockies has been described by Mr. Stewardson Brown. "The species," he says, "has been referred by authors to Picea Canadensis (Mill.) B. S. P., and P. Mariana (Mill.) B. S. P., to both of which it bears a certain resemblance, but from two months' experience with the tree during the past season, in the region from Banff, Alberta, to Field, B.C., I am satisfied that it is distinct from either . . ." Mr. Brown describes the new species under the name Picea Albertiana.

Corrugated Iron
For Sidings, Roofings, Ceilings, Etc.
Absolutely free from defects—made from very finest sheets.
Each sheet is accurately squared, and the corrugations pressed one at a time—not rolled—giving an exact fit without waste.
Any desired size or gauge—galvanized or painted—straight or curved.
Send us your specifications.
The Metallic Roofing Co.
WHOLESALE MANFRS. LIMITED
TORONTO, CANADA.

DETROIT COLUMN & MANUFACTURING COMPANY

The largest and most extensive Manufacturers and Shippers of COLONIAL COLUMNS AND COMPOSITION CAPITALS in the United States.

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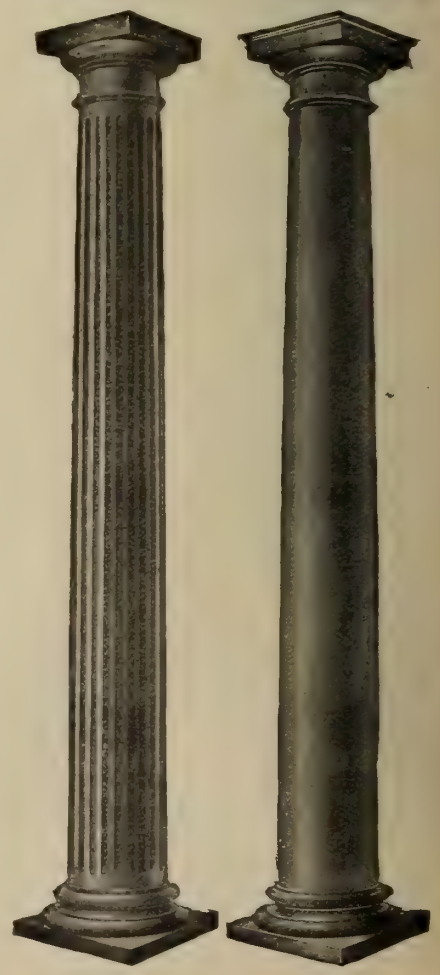

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We have the most perfect fitting LOCK-JOINT COLUMN made.

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WE FURNISH COLUMNS IN ANY SIZE OR LENGTH

The Rosebank Lumber Company, Limited

Manufacturers of *Nordin, New Brunswick*

FLOORINGS, SHEATHINGS, CLAP BOARDS and SIDINGS

DRY STOCK ALWAYS READY FOR SHIPMENT.

CURRENT LUMBER PRICES WHOLESALE

TORONTO, ONT.

CAR OR CARGO LOTS.

1 inch No. 1 Pine cuts & better	$49 00	51 00
1⅛ inch No. 1 cuts and better	54 00	56 00
1" No. 1 Cuts and Better	56 00	58 00
1⅛ in. No. 2 Pine cuts and better	46 00	47 00
1" No. 2 Pine Cuts and Better	48 00	50 00
1⅛ inch No. 3 Cuts and better	42 00	44 00
1" No. 3 Cuts and Better	44 00	46 00
1 in. Pine Dressing and better shorts	28 00	30 00
1x4, 6and8common	27 00	28 00
1 x 10 common	30 00	32 00
1 x 12 common	34 00	36 00
2 x 10 common	28 00	30 00
2 and 3 x12 common	34 00	36 00
1 x 10 inch box and common	27 00	29 00
1" mill run sidings	28 00	29 00
1x10and12millculls	22 00	23 00
1 inch mill cull Sidings	21 00	22 00
1" dead cullsidings	15 00	16 00
1⅛ inch Flooring	32 00	34 00

HARDWOODS—PER M. FEET CAR LOTS.

Ash White, 1sts and 2nds, 1 to 2 in.	$36 00	38 00
Ash, Black, 1sts and 2nds, 1 to 2 in.	33 00	35 00
Ash, Black, mill run	26 00	27 00
Birch, common and better, 1 in.	24 00	25 00
Birch, common and better, 1½ to 3 in	26 00	27 00
Birch, mill run	21 00	22 00
Basswood, common and better, 1 in.	25 00	26 00
Basswood, common and bet., 1½ to 2 in	26 00	28 00
Basswood, mill run	22 00	23 00
Soft Elm common and better, 1 in.	25 00	26 00
Soft Elm, common and bet. 1½ to 2 in	27 00	28 00
Spruce mill run	24 00	25 00
Spruce mill culls	17 00	18 00
Hemlock, 1x4 to 8 in	19 00	20 00
2x4 to 8 in., 10 to 16 ft.	22 00	23 00
2x4 to 10 inch, 18 ft.	22 00	24 00
Clear inch B.C. cedar, kiln dried		54 00
Clear inch B.C. cedar air dried boat lumber		57 00
Douglas fir dimension timber, up to 32 feet		37 80
Fir flooring, edge grain		44 00
1½ in. No. 1 4 ft. Pine Lath		4 75
1½ in. No. 2 4 ft. Lath		4 25
1¼" No. 1 32" pine lath	2 25	2 50
1½" No. 1 4 ft. hemlock lath		4 00
XXXX Pine Shingles		3 90
XX Pine Shingles	2 60	2 75
X Pine Shingles		90
XX Cedar Shingles		3 00
B. C. Shingles		
XXX 6 butts to 2 in.		3 85
XXXX 6 to 23-16 in.		4 07
XXXXX 5 to 2 in.		4 50
XX No. 2, 6 to 2 in. / XX " 6 to 23-16 in.		3 00
Red pine, clear and clear face	35 00	37 00
Red pine, common	25 00	27 00

BIRCH.

¼ Inch		16 18
16 "		26 28
17 " "		30 32
18 " "		

SARNIA, ONT.

UPPERS.

1 in., 8" and up wide	$78 00
1¼, 1½ and 2" "	78 00
2½ and 3" "	86 00
4" "	91 00

SELECTS

1 in., 8" and up wide	69 00
1¼, 1½ and 2" "	68 00
2½ and 3" "	81 00
4" "	86 00

FINE, COM. AND BETTER.

1 x 6 and 8"	45 00
1 in., 8" and up wide	55 00
1¼ and 1½" "	57 00
2" "	58 00

FINE COMMON.

2½, 3 and 4"	76 00 81 00

NO. 1 CUTS.

1 in., 8" and up wide	41 00
1¼ in. "	50 00
1½ in. "	50 00
2" "	54 00
2½ and 3" "	76 00
4" "	75 00

NO. 2 CUTS.

1 in., 6" and up wide	24 00
1¼ "	39 00
1½"	39 00
2" "	42 00
2½, 3 and 4" "	57 00 59 00

NO. 3 CUTS.

1 in., 6" and up wide	21 00
1¼ and 1½" "	30 00
2" "	30 00
2½, 3 and 4" "	40 00 45 00

MILL RUN

1" x 4"	25 00
1" x 5"	27 00
1" x 6 and 8"	27 00
1" x 10"	29 00
1" x 12"	31 00
1" x 13 and up	31 00
1¼ x 4 and 5"	$28 00

NO. 1 BARN.

1 in.	$28 00 to $37 00
1¼, 1½ and 2"	33 00
2½ and 3"	35 00
4"	40 00

NO. 2 BARN.

1 in.	27 00 to 31 00
1¼, 1½, and 2"	28 00
2½ and 3"	30 00

NO. 3 BARN.

1 in.	25 00 to 28 00
1¼, 1½ and 2"	25 00 to 28 00

BOX.

No. 1, 1", 1¼, 1½, 2	22 00 to 24 00
No 1 mill culls, 1, 1¼, 1½ 2"	18 00 to 20 00

MILL CULLS.

Mill Run Culls 1"	17 00
1", 1¼, 1½ and 2"	18 00
No. 2, " " "	16 00

LATH.

No. 1, 32"	1 75
No. 2, 48"	4 00
No. 1, 48" pine	4 50

OTTAWA, ONT.

MANUFACTURERS' PRICES.

Pine, good sidings: 1in. x 7in. and up	$40 00	44 00
1¼ in. and 1½ in. x 8 in. and up	50 00	56 00
1in. x 7 in. and up	52 00	56 00
No. 2 cuts 2x8" & up	34 00	36 00
Pine good strips 1 in.	35 00	38 00
1¼ in. and 1½ in.	36 00	40 00
2 in.	40 00	45 00
Pine good shorts: 1" x 7" and up	37 00	40 00
1 in.	28 00	30 00
1¼ in. and 1½ in.	40 00	43 00
2 in.	42 00	45 00
7" to "9 A Sidings		17 00
Pine, No. 1 dressing siding	26 00	29 00
Pine, No. 1 dressing strips	26 00	31 00
Pine No. 1 dressing shorts	20 00	25 00
Pine, 10 s. c and better 12' to 16'	25 00	28 00
Pine, 8 s. c. and better 12' to 16'	23 00	26 00
Pine, 7 up s. c. sidings	25 00	28 00
Pine s. c. strips	23 00	26 00
Pine, s.c. shorts	17 00	19 00
Pine, box boards	20 00	23 00
1 x 10 No. 1 barn	29 00	32 00
1 x 10 No. 2 "	23 00	25 00
1 x 8 & 9 No. 1 barn	23 00	26 00
1 x 8 & 9 No 2 "	20 00	22 00
Pine Shorts 6' to 11' x 10"	20 00	21 00
Pine mill culls	18 00	20 00
Pine O. culls	12 00	14 00
Spruce, 1"x4" & up	18 00	20 00
Spruce, 1" stocks, 7, 8, 9 and 10"	19 00	21 00
Spruce, 1" clear (fine dressing and B	24 00	26 00
Hemlock	14 00	16 00
Basswood	18 00	22 00
Birch	18 00	20 00
Lath, per M No. 1 white pine 1¾"	4 00	4 50
No. 2 white pine	3 50	3 75
Spruce, mill run	3 25	3 50
Red Pine, mill run	3 00	3 50
Pine Shingles xxxx, 18 inch	3 25	3 75
Clear Butt, 18 inch	2 75	3 25
xx 18 inch	1 70	2 00
White Cedar Shingles xxxx, 18 inch	4 00	4 50
Clear Butt, 18 inch	3 25	3 75
xx, 18 inch	1 85	2 00

QUEBEC, QUE.

WHITE PINE—IN THE RAFT

	cts.	
Square white pine, measured off, 30 to 40 feet average	35	45
First class Ottawa waney, 18 inch average, according to lineal	62	65
" " 19 to 20 inch average " "	65	70

RED PINE—IN THE RAFT.

Measured off, according to average and quality	30	40
Shipping order " " "	35	40

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	60	65

ELM.

By the dram, according to average and quality 40 to 45 feet	70	74
" " " " 30 to 35 feet	55	60

ASH.

10 inches and up, according to average and quality	25	30
Average 16 inch	35	45

WINNIPEG, MAN.

NO. 1 PINE, SPRUCE AND TAMARAC

DIMENSIONS, ROUGH OR S. 1 S. AND 1 E.

	6 ft	8 ft	10 ft	14 x 16 ft
2 x 4	19 00	22 00	24 00	24 00
2 x 6 and 2 x 8	22 50	22 50	24 00	24 00
2 x 10	22 50	23 00	26 00	24 50
2 x 12	23 00	24 00	27 00	26 50

PINE, SPRUCE, TAMARAC AND LARCH

MOUNTAIN STOCK

Dimensions

2 x 4-12	$25 00
2 x 4-8-14-16	25 00
2 x 4-10-18-20	27 00
2 x 6 / 2 x 8 } 8 to 16	25 00

Common Boards

4 inch	$21 00
6 "	23 00
8 "	25 00
10 "	25 00
12 "	25 00

Flooring

4 or 6 inch No. 1	$35 00
" " " 2	33 00
" " " 3	26 00

Shiplap—Finished

4 inch	21 00
6 "	24 00
8, 10, 12 inch	25 00

Siding

6 inch No. 1	35 00
" No. 2	33 00
" No. 3	26 00

Lath

No. 1 Cedar, Pine, Spruce	5 00
No. 2 " " "	3 25

PINE—ROUGH TIMBER

	12 ft.	14 and 16 ft
3 x 6 and 3 x 8	25 00	25 00
3 x 10	26 50	25 50
3 x 12	27 50	27 00
4 x 4 to 6 x 8	25 00	25 00
4 x 10 to 10 x 10	27 00	26 00
8 x 8	25 00	25 00
6 x 14 up to 32 ft		30 80

BRITISH COLUMBIA FIR

DIMENSIONS. S. 1 S. AND E.

2 x 4, 2 x 6, 2 x 8, 8 to 16 ft	$25 00
" " " 18 to 32 ft	27 00
2 x 10, 2 x 12, 8 to 16 ft	25 50
18, 20, 22 ft.	27 50
24, 26, 28, 30, 32	29 50
2 x 14 up to 32 ft	29 00
3 x 4 to 4 by 12, 8 to 16 ft	27 00
3 x 4 to 4 x 12, 18 to 32 ft	29 00
6 x 6 to 6 x 12 up to 32 ft	29 00
3 x 14, 4 x 14	29 00

B. C. FIR TIMBER—ROUGH.

8 x 8, 10 x 10, 10 x 12, 10 x 14, 12 x 12, 12 x 14, 14 x 14, 14 x 16, up to 32	$30 80
10 x 20	32 80
8 x 20	34 30

All Common Cedar $2.00 per M. less than Fir.

FLOORING.

No 2 Red Pine, 4 in	30 50
B. C. Fir	40 00

SHIPLAP.

Pine or Spruce	24 50
8 to 16 ft., 6 in	23 50
B. C Fir 16 ft., 12 in	22 90
B. C. Fir 16 ft., 6 in	21 90

BOARDS—ROUGH OR S. 1 S.

No. 1 Common Pine, 10 inch	$28 50
" 2 " " "	25 00
" 3 " " "	23 00
" 4 " mixed w dths	21 50
" 5 " "	18 50

SHINGLES.

XXX B. C. aCedar	$3.45
X X B. C. Cedar	2.45
X X X Dimension	.65

LATH.

No. 1 White Pine	$5.00
No. 1 B. C. Fir	4.50

HARDWOODS CAR LOTS, F. O. B. WINNIPEG

White Ash, C/2nd's, 1" to 2"	$64.00 to	$67.00
Birch, " 1" to 2"	49.00 to	55.00
Basswood " 1" to 1½"	45.00 to	50.00
Rock Elm " 1" to 2"	48.00 to	50.00
Hard Maple " 1" to 4"	47.00 to	55.90
Plain Red and White Oak C/2nds, 1" to 2"	65.00 to	63.00
Quartered Red " " 1" to 2"	74.00 to	79.00
" White " " 1" to 2"	85.00 to	90.00

BUFFALO AND TONAWANDA, N.Y.

WHITE PINE.

(Wholesale selling price.)

Uppers, 1, 1¼, 1½ and 2 in	$82 00	1½ in	40 00
2½ and 3 in	90 00	2 in	42 00
4 in	95 00	Shelving, No. 1, 13 in. and up, 1 in	45 00
Selects 1 in	73 00	No. 1 Mold st'ps 1 to 2 in	5 00
1¼ to 2 in	72 00	No. 2 Moulding Strips, 1 to 2 in	42 00
2½ and 3 in	85 00	Barn, No. 1, 12 in	37 00
4 in	90 00	6, 8 and 10 in	32 00
Fine common, 1 in.	57 00	No. 2, 10 in	32 00
1¼ and 1½ in	59 00	No. 2, 12 in	33 00
2 in	61 00	No. 3, 10 in	27 00
3 in	80 00	No. 3, 12 in	28 00
4 in	85 00	Box, 1 x 4	21 00
Cut'g up, No. 1, 1 in.	45 00	1 x 6 & up	24 00
1¼ and 1½ in	54 00	1x10	24 00
2" No 1 Cuts	58 00	1x12	25 00
No. 2, 1" in	28 00	1x13 and up	26 00
No. 2, 1¼, & 1½ in	43 00	1¼ and 1½ & 2 in	25 00
No. 2, 1¾, and 1½	32 00	Mill Culls, 1	20 00
No. 3 1½" & 2"	35 00	1¼, 1½ and 2 in	20
Dressing 1¼ in	42 00		
1¼x10 and 12	45 00		

BOSTON, MASS.

White Pine Uppers, 1 to 2 inch	$93 00 to $90 00
Selects, 1 to 2 inch	78 00 85 00
Fine Common, 1 inch	58 00 60 00
1¼ to 2 inch	64 00 66 00
No. 1 Cuts, 1 inch	48 00 50 00
1¼ to 2 inch	58 00 60 00
No. 2 Cuts, 1 inch	35 00 37 00
1¼ to 2 inch	48 00 52 00
Barn Boards, No. 1	37 00 47 00
No. 2	35 00 40 00
No. 3	32 00 34 00
Spruce, 10 and 12 in. dimension	24 00
9 in. and under	22 00
10 and 12 in. random lengths, 10 ft. and up	23 50
2x3, 2x4, 2x5, 2x6, 2x7 and 3x4 random lengths, 10 ft. and up	18 00
All other random lengths, 9 in. and under, 10 ft. and up	21 00
5 in. and up merchantable boards, 8 ft. & up, p. 1 s	20 00
Out Spruce boards, p. 1 s	17 00
1x2 and 1x3 furring p. 1 s clipped and bundled	21 00 22 00
1 ⅝" spruce laths	3 75
1 ½" " "	3 50

NEW BRUNSWICK CEDAR SHINGLES.

Extras		4 00
Clears		3 50
Second clears		2 35
Clear Whites	2 25	2 35
Extra 1s (Clear whites out)	1 35	1 35
Extra 1s (Clear whites in)		1 60

BRITISH CLUMBIA SHINGLES.

Red Cedar Extras, 16 in. 5 butts to 2 in.	4 50
" Eurekas, 18 in. " "	4 70
" Perfections, 5 butts to 2¼ in.	6 00

THE NEWS

ONTARIO

Messrs. Morgan, Lloyd & Stebbins are about to establish a mill at or near Minden.

John Stormont's saw mill at Rodney was recently destroyed by fire, the loss being $3,000.

The saw mill of Messrs. Rider & Kitchener, of Lindsay, was recently destroyed by fire with a loss of $5,000.

With a capital of $50,000 the Hocken Lumber Company has been incorporated, with head office at Falding, Parry South District.

Spear's saw mill in the northern part of Canton, near Brockville, was destroyed by fire last month, the loss being from $40,000 to $50,000, with $15,000 insurance.

John McDonald and William Craddock, employes at W. W. Carter's stave factory at Fesserton, have been placed under arrest, charged with having set fire to the factory on October 15th.

The Sable Logging Company has been incorporated with a capital of $75,000, with head office at Massey, Ont. The provisional directors are W. J. Bell, B. W. Arnold, J. A. Ferguson, and R. Frier.

Thomas Kirby, lumberman of Dunchurch, was recently found dead in the woods with a bullet in his head. It is thought that his death was caused by the accidental discharge of a gun which he was carrying.

Damages to the extent of $2,000 have been awarded Dr. Gustavus Davis, of Cayuga, for wrongful dismissal by the Ontario Lumber Company, in whose services he had acted as medical attendant in the defendants' mill on French river.

Judgment was reserved last month by the Ottawa Supreme Court in the case of New Swander versus Gregrich and Burr versus the Arrowhead Lumber Company. The appellants brought suit to recover money alleged to be due them on a logging contract and for damage for loss of prospective profits on account of being stopped in their work through seizure of their property covered by chattel mortgage given by them to the company to secure advances made by the latter to enable them to carry out their contract.

EASTERN CANADA

Fire partially destroyed the Jordan mill at Pleasant Point, N.B., early last month.

Under the name of Charles T. White & Son, a company has been incorporated with a capital of $100,000, with head office at East Apple River, N.S.

The Granby mill, formerly the property of Dunn Bros., which was sold about a year ago to George Dunn, was destroyed by fire last month. It was valued at $15,000.

The Albert mills, situated at Barachois, Gaspe County, Que., have been totally destroyed by fire, together with the adjoining wharf and buildings. About 5,000,000 feet of lumber was also lost.

WESTERN CANADA

The North Pacific Lumber Company, of Barnet, will erect a large mill on Burrard Inlet early next spring.

Lyte's sash and door factory, Vancouver, was destroyed by fire on September 25th, entailing a loss of $8,900.

J. E. Doak, of Doaktown, N.B., has purchased a site and machinery equipment for a factory to be erected at Saskatoon.

Grading is now being done at Wabigoon for the spur from the main line of the C. P. R. to the Bryden pulp mill works.

The Watkins Logging & General Contract Company have been incorporated at Victoria, B.C., with a capital of $100,000.

The new Laking shingle mill at Cloverdale, which was destroyed by fire several months ago, has been rebuilt and resumed operations.

A fire of supposedly incendiary origin last month destroyed $5,000 worth of lumber in the yards of the Prince Albert Lumber Company.

A new saw mill has been erected on the C. P. R. flats at Nelson for the Porto Rico Lumber Company. The mill will have a daily capacity of 45,000 feet.

The saw mill of Slater & Gagnay, situated on Narcise Creek, ten miles east of Colville, was destroyed by fire recently, the loss being between $4,000 and $5,000.

Under the name of the Nepisigui Lumber Company, Limited, with a capital stock of $100,000, a new firm has been incorporated, with head office at Bathurst, N.B.

The British Columbia Government have engaged a gasoline launch for patrol duty along the provincial coast to prevent the operations of hand loggers and timber thieves.

Messrs. Burton report that their sales are keeping up, despite the apparent quietness of the lumber trade, the demand for shingle saws being greater this year than ever before.

A new shingle mill will shortly be erected in New Westminster by the North American Shingle Company, which has applied for incorporation. It is stated that the plant will cost about $20,000, and employ forty hands.

The Canada Shingle Company, of Hastings, B.C., report steady running all summer. They expect to close down about December 1 for six weeks, during which time the various necessary repairs to the plant will be made.

Pinned under a log and unable either to bear the horrible pain or fearing if rescued he would be a helpless cripple for life, Claude Harkness, lumberman, of Cle Elum, Washington, was found by relatives with his throat cut.

Joseph Gagnelle, at one time a partner in the Yale Columbia Lumber Company, has begun the erection of a new saw mill in Cascade township. Operations will be confined to the cutting of railway ties for the Grand Trunk Pacific.

J. F. Beard, of the Marysville Lumber Company, is having plans drawn up for a shingle mill at Everett. An equipment of six upright machines is contemplated. This will give a cutting capacity of from 180,000 to 200,000 shingles in ten hours.

Coleman, Spencer & Company will proceed at once with the erection of a saw mill, logging railroad, etc., on Emily lagoon, McKenzie Sound. The mill will have a daily output of 120,000 feet, the proposed improvements involving an outlay of $500,000.

Compensation for injuries to the amount of $412 was granted to Ezra Noepka, a logger of Vancouver, the defendant being the Vancouver Timber & Trading Company. Plaintiff charged the company with being responsible for a log going down a chute and causing him permanent injuries.

Under the name of the Canadian Mexican Development Company, Limited, a company has been incorporated, among other projects, for the purpose of dealing in timber limits and lumber manufacture. The head office of the company will be at Victoria, B.C., the capitalization being $1,000,000.

The Gulf Lumber Company, Limited, will hereafter conduct their logging business only, intending to push this branch of the trade more extensively. They are about to add four more donkey engines to their equipment at the camps. The Saanich Company will be supplied with logs by them.

George McKean and others, of St. John, N.B., and Edward G. Price, of London, have been incorporated as the George McKean Company, Limited, with a capital of $100,000. The new firm will take over the lumber business of Mr. McKean, one of the largest shippers in the Maritime Provinces to trans-Atlantic ports.

The Squamish Valley Shingle Bolt Company, Limited, have been incorporated with an authorized capital of $25,000, to carry on a logging business in British Columbia. The head office is located at 1605 George street, Vancouver, the board

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of directors being composed of Fred. Buscombe, chairman; Wm. Abel, secretary; Wm. Tytler and G. F. Gibson. They will engage in the logging business and the manufacture of shingle bolts.

The first building on False Creek for the Empire Manufacturing Company, Limited, of Vancouver, is now well under construction. The company have lately decided to go right ahead with their machine shop building, which is to be located just across the railway track from the foundry building. It will be 60 by 80 feet, with a dock adjoining. The whole plant is expected to be in operation by December. The Empire Company are manufacturers of "Phoenix" logging engines.

The Anglo-American Lumber Company, Limited, of Vancouver, B.C., have lately undergone a change of management, Mr. R. H. McKee dropping out of the general management, while Mr. H. R. Hardy has been appointed secretary-treasurer, in active charge of the office and of the financial department. Mr. Hardy comes to Vancouver from Toronto, where he was connected with the Ontario Lumber Company of that city and French River. It is understood that Mr. McKee has become associated with the management of the new North Arm Lumber Company, Limited.

The Jordan River Lumber Company, Limited, of Victoria, B. C., was organized in May last, capitalized at $300,000. Mr. Isaac P. Calhoun is president and manager, and J. D. Lutz, secretary-treasurer. They own some 32,000 acres of lands on Vancouver Island, timbered principally with fir and some cedar and spruce. The company are engaged wholly in logging operations, commenced during September, their camp being located on the Jordan river, about 30 miles from Victoria. Here they have put in about one mile of logging railroad, on wihch they are operating o Climax locomotive with Washington Iron Works yarders.

The large sawmill at Sydney, on Vancouver Island, which has been operated by the Gulf Lumber Company, Vancouver, has been sold to the Saanich Lumber Company, Limited, of Victoria. The purchase includes the mill property and stock of lumber on hand at the time of transfer, October 14. The capacity of this mill is about 50,000 feet per day. The equipment consists of a circular sawmill, lath and shingle mill, and a fully equipped planing mill and dry kiln. Shipments can be made by rail or water. The company have been but lately organized, the principals being Messrs. Michael Carlin and J. G. Billings. Mr. Carlin was until recently manager of the Columbia River Lumber Company, Golden, B.C., and Mr. Billings manager of the Yale Columbia Lumber Company at Nelson.

The Prince Rupert Timber & Lumber Company, Limited, have been incorporated as an extra-provincial company, with a capital stock of $450,000. The head office will be at 48 Sparks street, Ottawa, and British Columbia office at 439 Richards street, Vancouver, B.C. The officers of the company are: President, E. H. Wood, Vancouver, B.C.; vice-president, W. H. Dwyer, Ottawa; secretary-treasurer, William Anderson, of the J. R. Booth Lumber Company, Ottawa. These, together with J. H. Sanderson, of Vancouver, and Alex. Fleck, of Ottawa, form the directorate, Mr. Moore being also general manager. The company own timber limits containing about 2,000,000 feet of standing timber, located on Vancouver Island, the north coast of the British Columbia mainland, and in the Carrot River valley, in the Province of Saskatchewan.

The A. J. Burton Saw Company, Limited, of Vancouver, are preparing for a brisk business next season, in expectation of which they have just installed one of the latest and best flatteners for circular saws up to 72 inches. This machine flattens and tempers circular saws under several tons pressure. This process of tempering saws is considered a guarantee of uniformity of temper, since every saw will be exactly alike in temper and toughness, the degree of temper not being decided by color or by the eye, but by electric pyrometers and time. The A. J. Burton Company is deserving of congratulations for putting in this machine, and in being able to secure an experienced man to instal and demonstrate it, and we feel sure that the millmen of Canada and the local trade especially, will appreciate the saw company's progressiveness in obtaining the flattener.

The Burrard Lumber Company, Limited, of Vancouver, operate a saw mill on the south shore of Burrard Inlet, about five miles east of Vancouver City. Messrs. Murray and Turner, manager and treasurer respectively, have their city offices at 414 Seymour street, Vancouver. The mill, which has a capacity of about 25,000 feet per ten hours, is equipped with a top and bottom circular saw mill, rope feed carriage, 3-saw edger, supplied by the Waterous Engine Works, and McGregor-Gourlay planer, taking up to 12 x 24 inches. The power plant consists of an 85 horse-power boiler from the Vancouver Engineering Works, and a 75 horse-power Waterous engine. The main line of the C. P. R. runs right past the mill, a spur line having been put in from the main track,through the mill yard. The output of this plant consists mostly of fir lumber, which is marketed in the prairie provinces.

The Winnipeg Lumber Company, Limited, of Vancouver, B.C., are building a new mill at Lilloet to replace that now in operation. Extensive additions to their timber holdings have rendered this step necessary, the company having recently acquired 960 acres of timber limits, comprising on an average 30,000 feet of timber to the acre. About three-quarters of this is fir and the balance mostly cedar. The new mill building will contain all new machinery, including a double circular twin engine, steam feed carriage, a six saw edger, with all live rolls, transfers and slashers. The mechanical equipment of the mill was supplied by the Waterous Engine Works Company through their British Columbia agent, Mr. H. B. Gilmour. The erection of the new mill has been under the supervision of Mr. L. M. Proctor. It is expected it will be in full operation by April next. In the meantime the old mill will be kept busy all winter on orders now in. The company sell largely to the C. P. R., the balance of their output going to the export trade.

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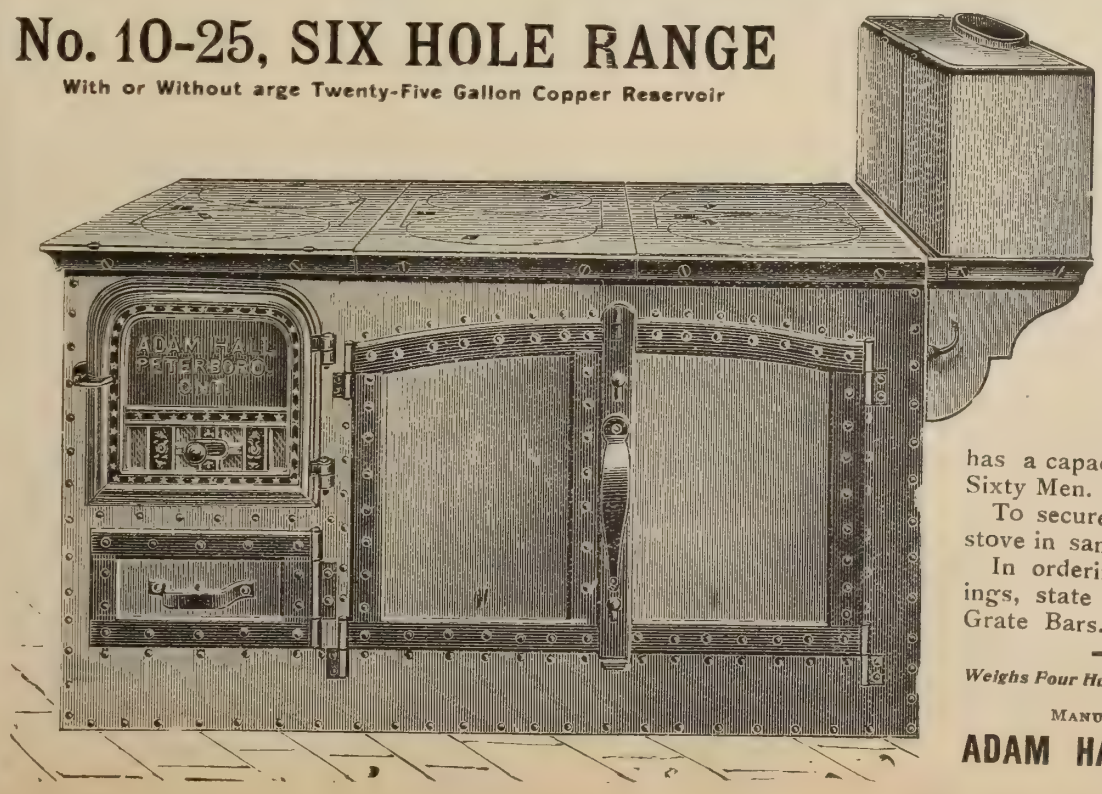

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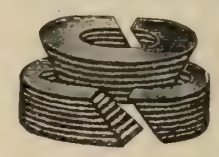

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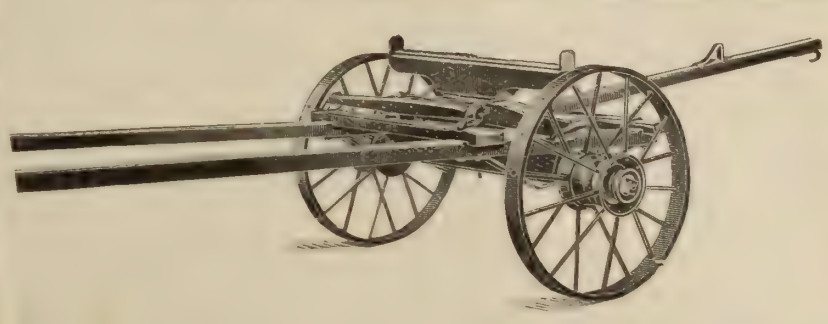

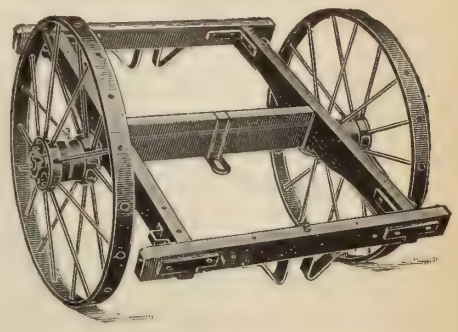

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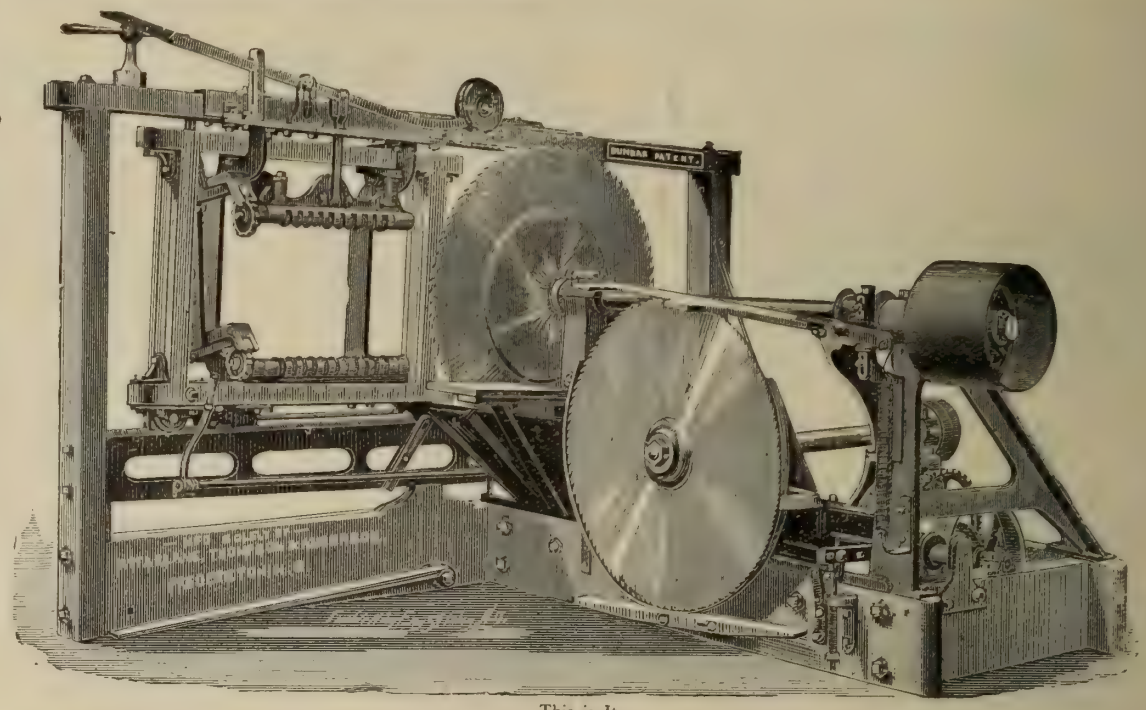

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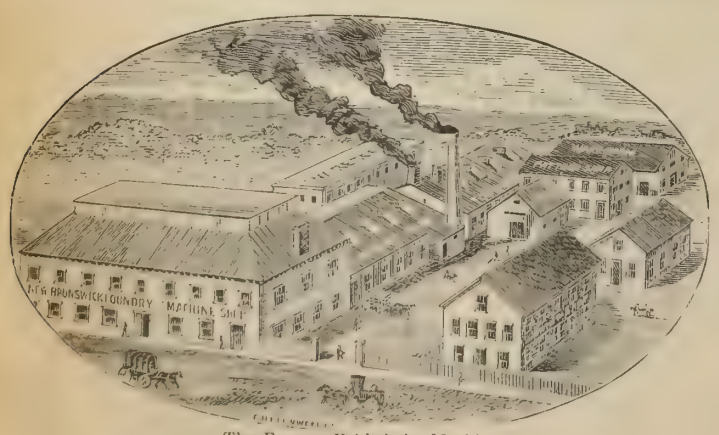

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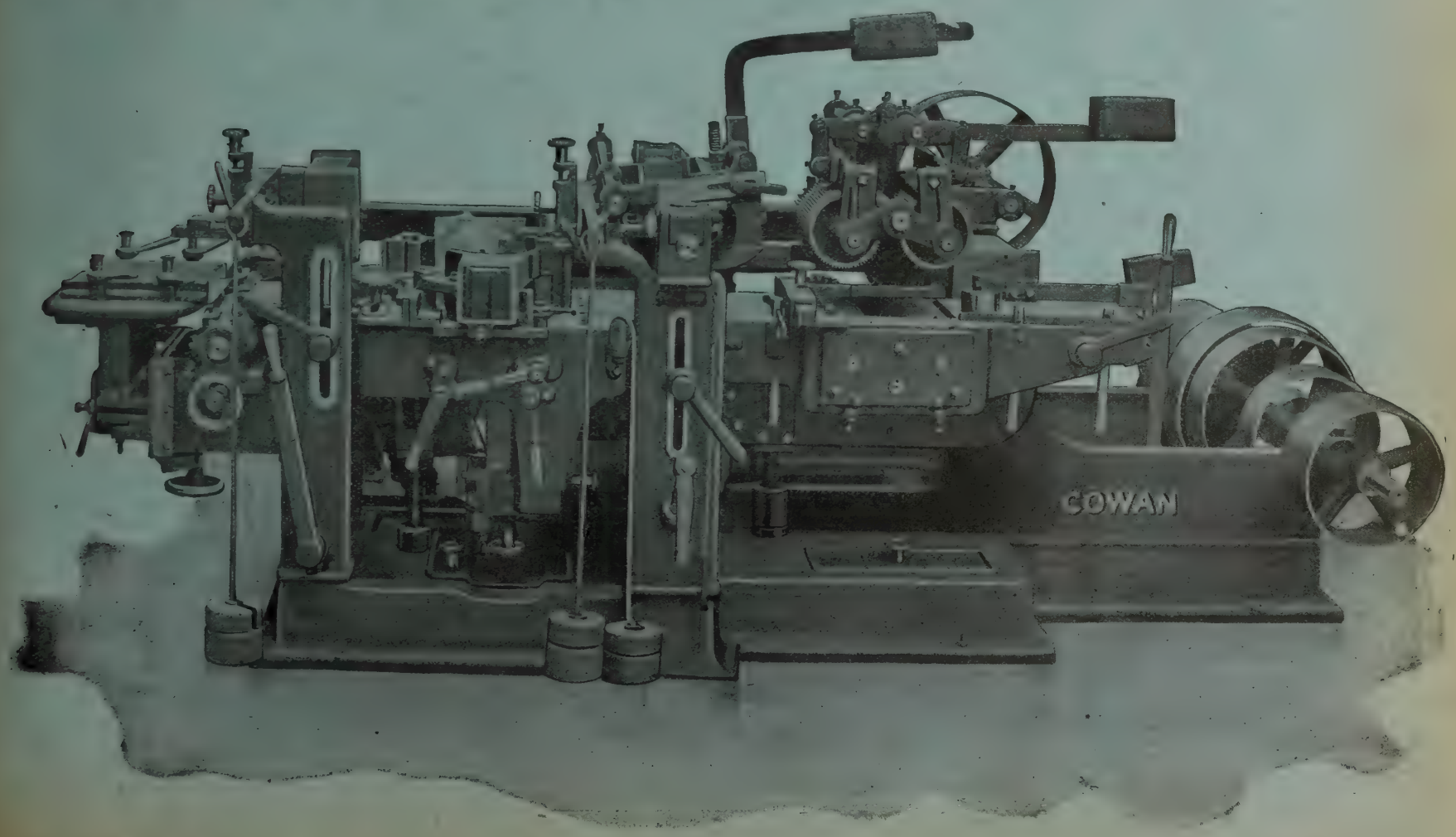

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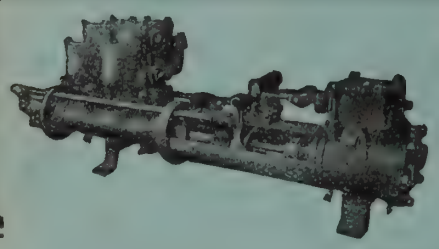

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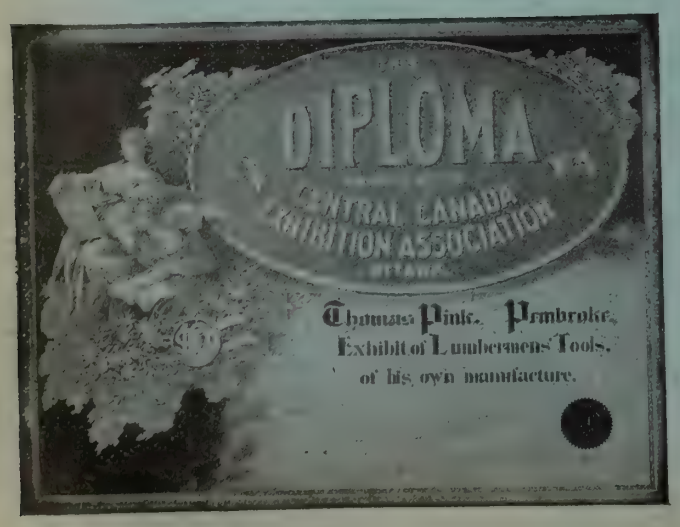

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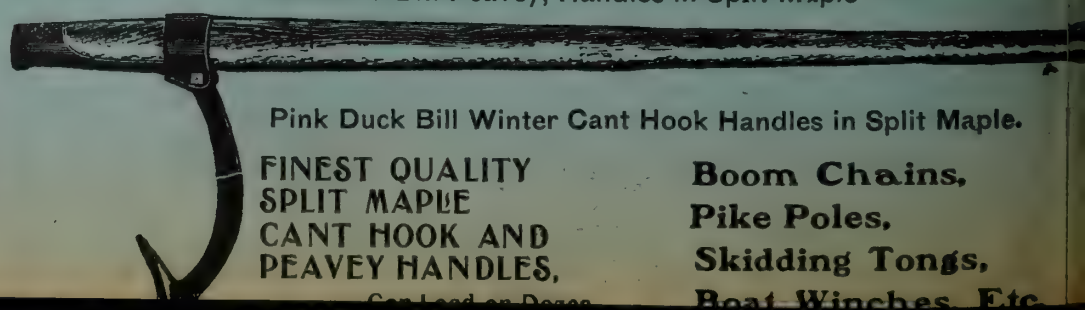

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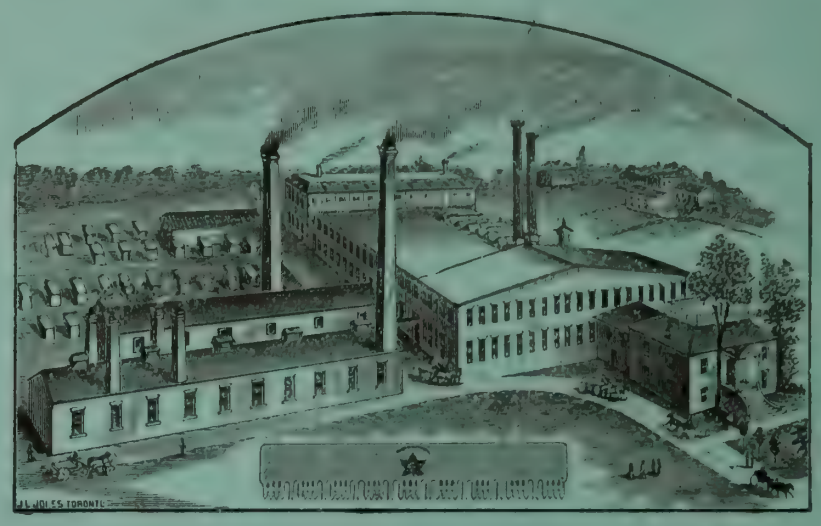

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Its Superiority consists in its Excellent Temper. It is made of "Razor Steel," which is the finest ever used in the manufacture of Saws. We have the sole control of this steel. It is tempered by our secret process, which process gives a keener cutting edge and a toughness to the steel which no other process can approach.

Maple Leaf Saw Set

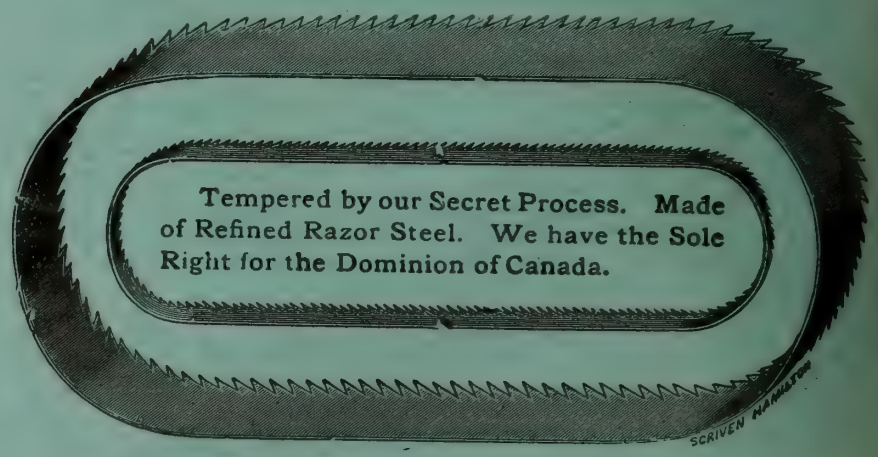
MANUFACTURED BY

SHURLY & DIETRICH, Galt, Ont.

Directions.—Place the set on the point of tooth, as shown in the accompanying cut, and strike a very light blow with a tack hammer. If you require more set, file the tooth with more bevel.

If you follow directions you cannot make a mistake. Be sure and not strike too hard a blow, and it will set the hardest saw. **On receipt of 40 cents we will send one by mail.**

We are the only manufacturers in the world who export Saws in large quantities to the United States.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SCRIVEN HAMILTON

We Manufacture

HIGH GRADE BAND SAWS

Of All Widths and Lengths.

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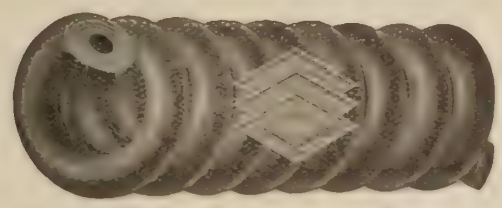

"Cobb's" Packing is especially adapted to withstand heat and highest pressure. The rubber core is oil and heat-proof and will not harden, but remain elastic indefinitely. The outside covering is made of material that is not affected by heat. The lubricant employed is the result of much scientific research and is absolutely free from grit or acids.

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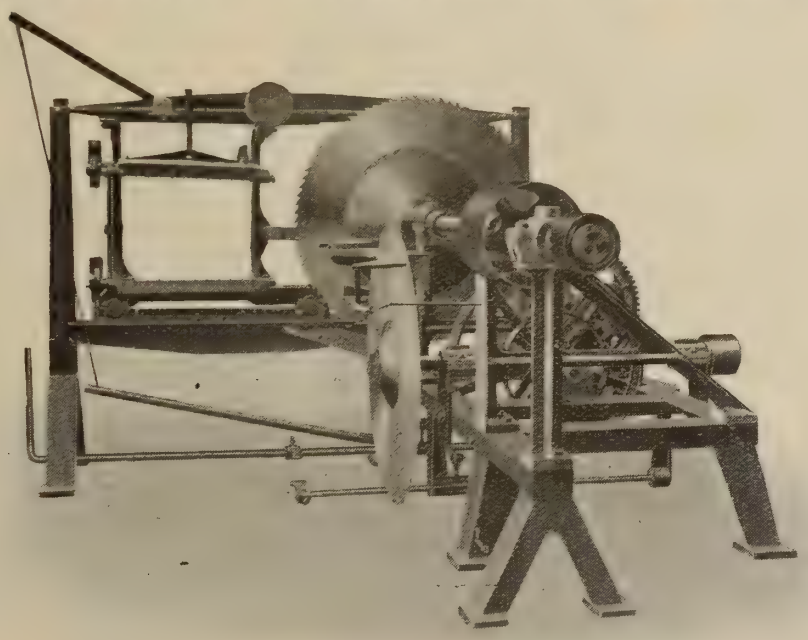
The Machine that has brought BRITISH COLUMBIA SHINGLES to the Front.



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Its construction is simplicity itself.

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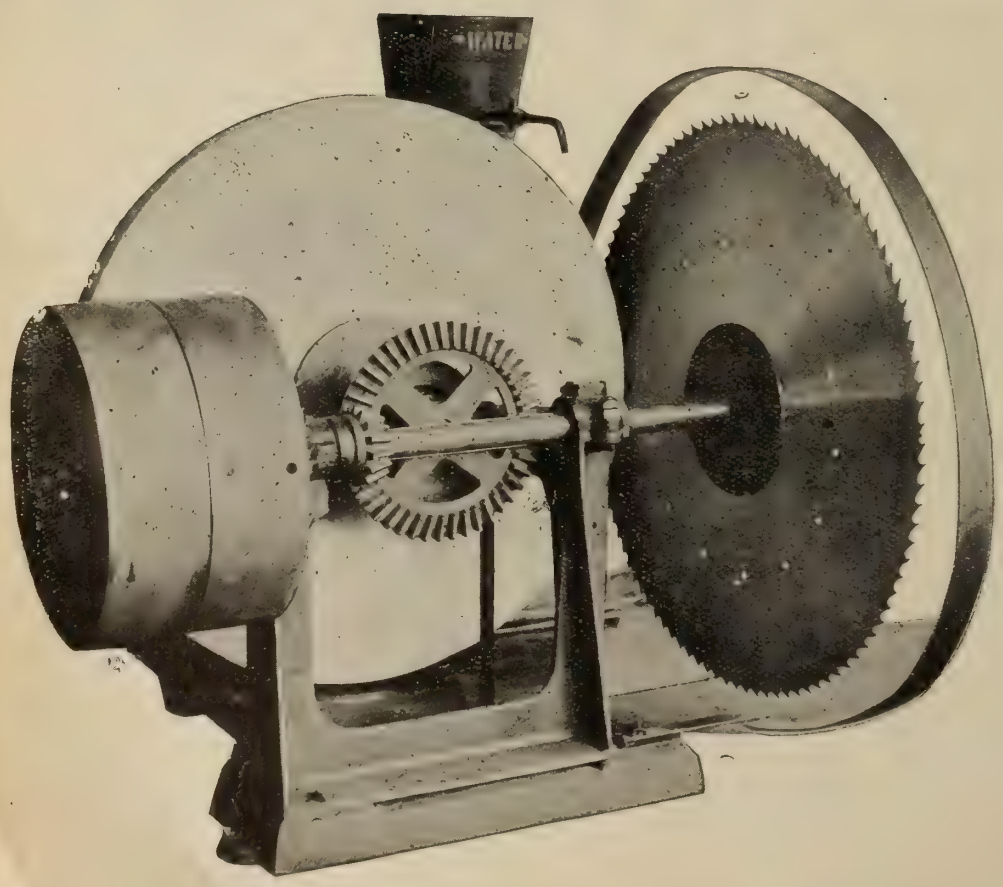

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FOR keeping down the thickness of shingle saws and thereby saving timber, we are now putting on the market a grinding machine. It will at once be seen that we have made a radical change from anything at present on the market for this purpose. The saws are ground much quicker with the grindstone than with the emery wheel. It is also found that the grindstone does not roll the saws out of shape as the emery wheels do. The cut shows the machine so clearly that very little, if any, explanation is necessary. The shaft on which the saw is fastened is driven direct with the belt; the grindstone being driven with a bevel gear and pinion. The grindstone is made to move back and forth by the cam. The grindstone shaft is not at right angles to the saw shaft, but at an angle equal to the taper on the saw. This angle can be made greater or less by turning the eccentric sleeve in which one end of the shaft runs. The position of the feeding cam can be adjusted in or out by slacking up the bolts holding it and pushing it in the direction wanted. The machine is simplicity itself, and, as will be seen, is built very strongly.

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Important Features covered by Patents

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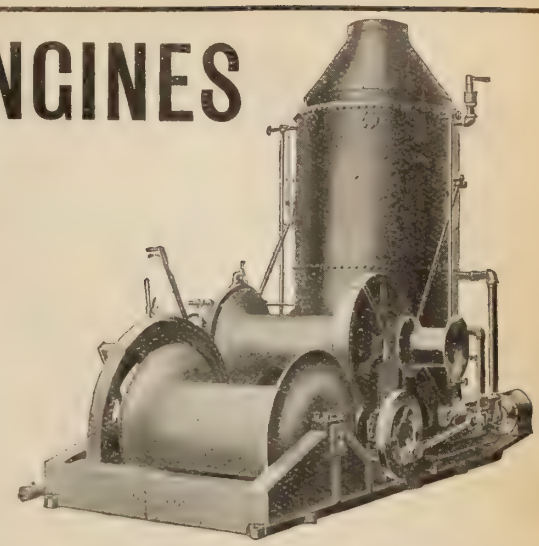

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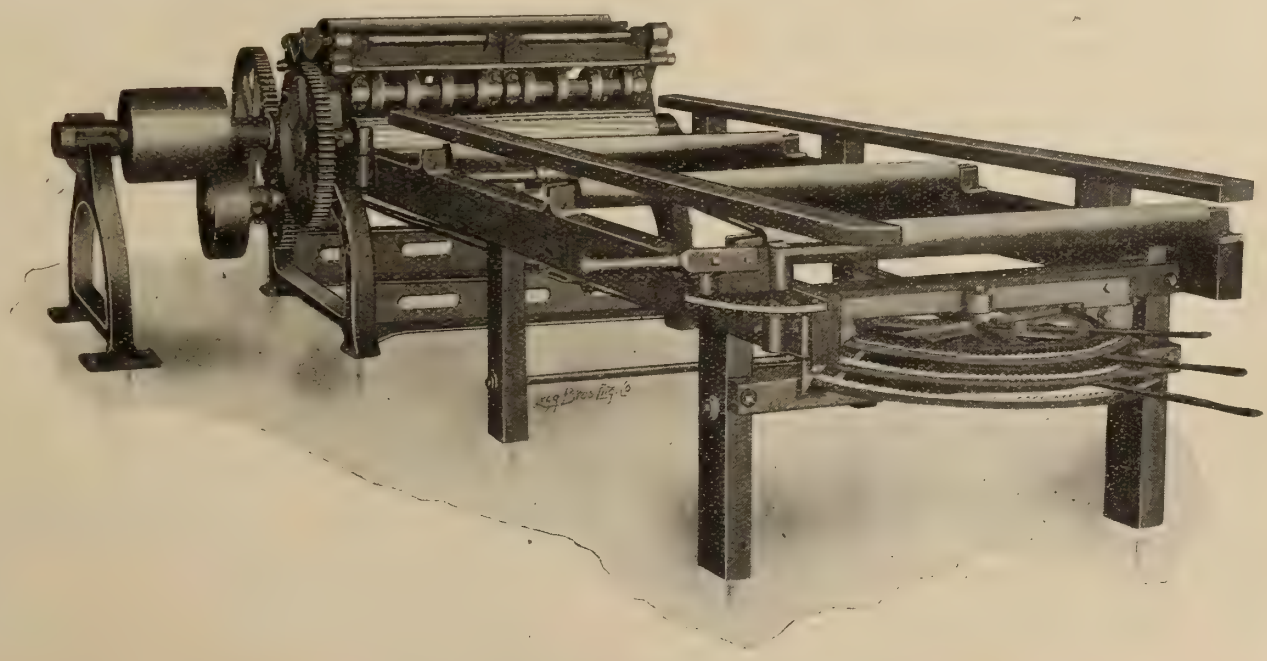

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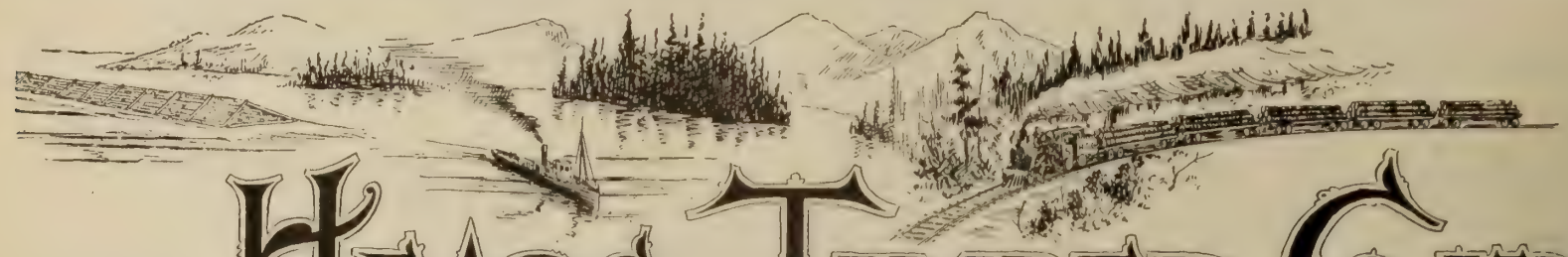

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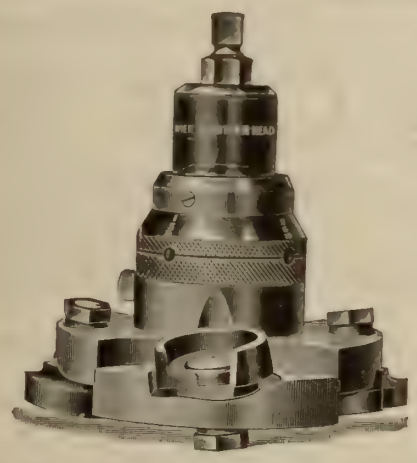

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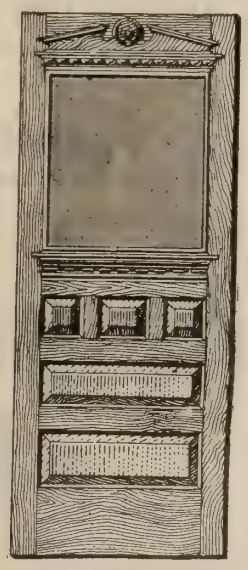

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THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in the lumber, wood-working and allied industries in Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

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TORONTO — NOVEMBER 15, 1907 — MONTREAL

WHICH IS CORRECT?

In circular No. 15 of the United States Forest Service, recently to hand, some statistics regarding the comparative strengths of structural timbers have been issued which seem at variance with a test made a short time ago by Professor Riddell, of the School of Practical Science, Toronto, for the Boake Manufacturing Company. This test was to determine the comparative strengths of British Columia Douglas fir and Georgia pine, the test resulting in favor of the former.

To quote the report of Professor Riddell, "the beam of Douglas fir failed under a load of 55,320 pounds, by shearing along the neutral axis, there being also slight indications of failure on the tension side. This ultimate load of 55,320 pounds corresponds to a shearing stress along the neutral axis of 263 pounds per square inch, or a fibre stress at the lowest point of the tension side of the beam of 5,744 pounds per square inch.

"The beam of Georgia pine failed under a load of 43,550 pounds, by breaking on the tension side. This load of 43,550 pounds corresponds to a modulus of rupture of 4,522 pounds per square inch."

The United States Forest Service report states that "longleaf pine has been for a long time the standard construction timber, not only on account of its strength, hardness and durability, but also on account of the good lengths of heartwood that can be obtained free from knots.

"Longleaf pine timber has been very extensively tested, not only in small sticks, but more rarely, in large sticks as well: In the markets at present any heart pine, whether longleaf, shortleaf, or loblolly, which shows a close-ringed, hard texture, is sold under the name of longleaf pine, while the wider ringed, more rapid and sappy growth is sold as shortleaf pine. The names 'Georgia pine' and 'Alabama pine' are often used to designate timber coming from the tracts of longleaf pine in those States.

"The tests represent longleaf pine of an excellent merchantable quality. That from Georgia was purchased at New Haven, Conn., and had been on the market about six months. It was of better quality than that ordinarily found in the market as 'merchantable' stock."

The modulus of rupture of this latter is given as 8,384 pounds and the modulus of elasticity as 1,820,000 pounds per square inch, the modulus of rupture representing the strength of the timber and the modulus of elasticity its stiffness.

In the case of partially air-dried Douglas fir the modulus of rupture was found to be only 6,975 pounds and the modulus of elasticity 1,000,000 pounds per square inch.

That tests of this kind show such varied results, is perhaps to be accounted for by the fact that the strength of timber varies greatly with the amount of moisture it contains, the regularity of the grain, number and position of knots, etc. The strength of large sticks appears to change very little for the range of moisture usually met with in practice. Small pieces, when kiln-dried, increase in strength as much as 300 per cent., but large beams can not be dried out to the same extent. Moreover, the drying process often produces checks and ring shakes, the weakening effects of which more than counterbalance any gain in strength due to seasoning.

Much of the information hitherto available concerning the strength of timber has been secured from tests of small pieces without defects. This can not safely be assumed to hold good for large-sized timbers as found on the market, since these commonly contain such defects as checks, knots, cross-grain, etc. The location of the defects, as along the center or near the upper or lower surfaces of the timber, varies the extent to which they lessen its strength; and the proportion of heart and sap wood, and the moisture condition must also be considered.

The ultimate conclusion of these various tests will be watched with great interest by many lumbermen and contractors in Toronto, to whom the question has been a source of speculation for some time past.

BIG TIMBER VS. DRESSED LUMBER.

The high prices now being obtained for all kinds of dressed lumber, especially clear stuff, make it inevitable that the price of large timbers must soon increase greatly in value. While orders for this class of material do not specify perfectly clear all the way through, it is inevitable that on a timber, say 70 feet long, fully 35 or 40 feet of it will be perfectly clear. By converting this into flooring, or some other class of manufactured lumber requiring clear stuff, a very much greater price can be obtained for the same amount of timber.

Moreover, the cost of transportation for heavy timbers is greater in many respects. The first essential is two flat cars, as one car would not begin to hold or carry a timber of the above mentioned size. Also there is the additional need of cross ties to go under the timber, since, if the timbers were placed flat on the floor of the two cars, these latter would be held too rigidly when going around curves, en route to their destination. These cross ties, moreover, are practically a loss to the millmen. Furthermore, the freight on shipments of this class is high on account of the weight, for the timbers are never very dry, whereas, in the case of dressed lumber it has usually been dried before leaving the mill. True, there is a saving in the cost of drying large timbers, but that amounts to little more than the cost of handling the lumber once or twice, as when a mill has a kiln, it is usually in operation anyway. There is also the added cost of converting a log into flooring, siding, or other manufactured lumber, as against merely squaring it for the big timber market, but even that is not a great consideration.

Taking everything into consideration, a much greater profit can be realized by a well equipped millman from a ninety or a one hundred foot log converted into dressed lumber, properly graded, than can be obtained by disposing of it as big timber at the prices now prevailing.

BUILDING OF PULP MILLS.

In another place in these columns appears the substance of an address delivered by Lieutenant-Governor Tweedie, of New Brunswick, in the course of which the pulp wood problem is touch upon as it effects the Maritime Provinces. In the opinion of His Honor the Lieutenant-Governor, the agitation in favor of an export duty being placed upon pulp wood leaving New Brunswick would be unwise legislation, as the lack of water power in that province would render impossible an extensive erection of pulp mills and thereby destroy what is now a profitable industry.

"It will be seen," he says "that it is not every locality within the

province where a pulp mill can be successfuly started. Outside of power, abundance of water is a great essential in the manufacture of pulp and paper and unless it can be liberally supplied it is usless to talk of establishing pulp mills."

In this statement there is a manifest oversight of the fact that already pulp wood is being shipped for manufacture far from the sources of supply to distant points in the United States. It cannot be expected that pulp mills can spring upu in this country with mushroom growth in the midst of every promising clump of spruce. Shipment of the raw material for long distances within Canada itself, is a foregone conclusion in many instances, and certainly presents some initial difficulties. These, however, appear not at all insurmountable when there are taken into consideration the great handicaps to which American paper manufacturers are now subject in getting their raw material from points in Northern Ontario and Quebec, difficult of access, to their mills in Michigan, Wisconsin and Pennsylvania. These mills must be built at suitable points in this country, whether by home or foreign capital it matters little, so long as we can secure for Canada the full benefit of her natural resources.

MUST NOT STRIP CANADA.

Appreciation of the fact that Canada's forest must not be ruthlessly depopulated is voiced by FORESTRY AND IRRIGATION, Washington, D.C., in the following terms.

"Some persons place all their hope of relief from high prices of lumber on supplies from other countries, particularly Canada.

"However desirable it may be to get lumber from Canada and thereby save our own trees, still such relief can be but temporary. It is imperative that we take care of our own timber crops, and not stop with coveting those of our neighbors. It is not merely a question of present prices, but of guarding against having no supply at any price. If we should import all of our timber supply from Canada for the next twenty-five years, and the cutting should be as wasteful as it has been in this country in the past, then there would be the same conditions facing us later.

"It is very much to be hoped that the Canadians will not allow us to cut their timber without regulation, however eager we may be to buy it. This would be for their benefit and likewise for ours. For the sake of a permanent supply, we should wish that Canada or any other country from which we may have to import lumber should put its forests under the same careful administration that now is given to the National Forests in the United States.

"Suppose a sailing ship a month's journey from land has a week's provisions in one part of the ship untouched, and a week's provisions in another part half used up, and it is proposed to put the crew on half rations in order to have sustenance until land is reached. Is it a valid answer to say there is no need to economize on the partly used stock, because there is an untouched stock in another part of the ship?"

UNITED STATES IMPORTS OF CANADIAN TIMBER.

"Some of the advocates of the removal of the duty on lumber are using as an argument that since the Dingley Bill was passed the importation of lumber from Canada into the United States has been steadily declining," says the "Mississippi Valley Lumberman." "On the contrary it has been increasing. The value of wood imports from Canada in 1898 was less than $10,000,000. Since then, with the exception of the fiscal year 1901, each year has shown an increase, and in that ending June 30, 1906, the total was $21,000,000. This ought to prove that the great demand for lumber has caused the Canadian manufacturers to seek this market for increasing amounts of their products in spite of the tariff."

LUMBERMEN RE SWITCHING CHARGES.

At the session of the Railway Commission, held in Toronto recently, the voice of the lumberman was heard in no uncertain tone in reference to the excessive inter-switching charges on lumber, levied by the Grand Trunk Railway.

On March 1st last a charge of $4 to $5 per car was put into effect for this purpose, by the Grand Trunk Railway Company at Toronto. Formerly the charges for switching from one railway to another was only $2, where the freight was 6 cents per hundred or more, and under that there was no inter-switching charge. There had up till that time been a special discrimination in favor of Toronto as against other cities in the matter of these inter-switching charges, but it was feared that this discrimination could not be justified before the Commission by the railway companies, and, therefore, it had been decided to levy the full charges for inter-switching and put Toronto on the same basis as other cities.

Mr. A. Echardt, of the Laidlaw Lumber Company, in testifying before the Commission said his firm had, after prolonged negotiations, located on the Canadian Pacific line and had a verbal assurance that the switching charges would be absorbed by the Grand Trunk. On March 1st the Grand Trunk had notified him about the extra charges and he had strongly protested. The company held cars and charged $40 demurrage. The charges levied on his firm since March 1 for switching amounted to $1,092.27, of which $262.00 were still in dispute.

Mr. G. W. Boake, of the Boake Manufacturing Company, North Toronto, had a written agreement with the Canadian Pacific, made in 1892, that the Grand Trunk would absorb all switching charges, but in March of this year he was notified that he would have to pay these, and the extra amount so paid amounted to $1,360.70 already this year.

Mr. Wm. C. Irvin, manager Toronto Junction Lumber Company, said he had paid $903 extra for these switching charges. He had paid under protest.

Mr. W. J. McMurtry, manager of the Gold Medal Manufacturing Company, gave figures to show that the additional switching charges were on hardwood, equal to 50 cents per 1,000 feet. This meant that his firm was handicapped to that amount because it was located on a C. P. R. siding.

A REASSURING ESTIMATE OF THE WESTERN CROPS.

The Canadian Pacific Railway has handed out for publication the following estimate of the crop for 1907, affording a comparison with that of 1906:

1907.

Grain	Acreage	Estimated yield per acre	Estimated crop	Average price Oct. 15th	Value at Fort William
Wheat	5,010,352	14	70,144,928	106¾	$ 32,198,381.21
Wheat				100	39,982,510.00
Oats	2,332,110	36	83,955,960	55	14,575,000.00
Oats				45	25,855,162.00
Barley	787,000	28	22,036,000	68	14,984,480.00
Flax	121,575	10	1,215,750	135	270,000.00
Flax				98	945,435.00
Total estimated value of crop of 1907, Oct. 15					$128,860,988.21

1906.

Grain	Acreage	Estimated yield per acre	Estimated crop	Average price Oct. 15th	Value at Fort William
Wheat	5,013,544	19	94,461,000	73¼	$ 53,278,365 52
Wheat				68¼	14,828,015.47
Oats	2,119,757	41½	87,850,655		
Oats				34¾	25,338,325.29
Oats				31¾	4,741,738.99
Barley	603,485	35	21,050,147	40½	8,529,309.53
Flax	93 7 5	10½	985,019		
Flax				110½	1,001,369.78
Flax				75½	59,495.51
Total value of crop of 1906, Oct. 15, 1906					$107,772,620.09

ONE EFFECT OF THE MONEY STRINGENCY.

A remarkable thing has happened since the stock and bond flurry in Wall street last March, says the American Lumberman. The pole demand since then has dropped to almost a negligible quantity. Owing to the fact that the wire line companies have been to a large degree unable to negotiate their bonds, they have been forced to suspend projected extensions and new trunk lines, and consequently do not need the poles they contracted for last year. The result has been that deliveries have been held up. The responsible companies eventually will take the poles contracted for, but are pursuing a policy of delay so far as deliveries are concerned.

Forest Planting on Waste Land

By Prof. E. J. Zavitz,
Forester Department of Agriculture, Guelph, Ont.

The Ontario Department of Agriculture has started in on a policy of assisting and encouraging the reforestation of the waste portions of the Province. Various types of unproductive land may be found in the shape of steep hillsides or light sandy or gravelly soils. These lands, however poor, are capable of growing trees, and by a small outlay of labor may be made to yield results.

Briefly, the method adopted to encourage such work is as follows: A land owner having waste lands makes application for assistance. The Department sends an officer who makes planting plans, advising the applicant as to methods of planting and kinds of trees adapted to his individual case. The applicant, upon agreeing to carry out instructions in regard to care and protection, receives enough trees to plant two acres. An owner with ten or twelve acres of waste land can in a few years, by a small annual outlay, cover the whole area. At present, advice and trees are supplied free, but the owner pays for transportation on trees.

To the lumberman concerned in large operations the planting of these small areas of waste land may seem a trifling matter. The value of the work is seen in the aggregate. These scattered lands will comprise a large acreage. Also, the demonstration throughout the province that waste land planting is possible and practical will be of high educational value in aiding future policy along similar lines in larger undertakings.

Fig. 1—Waste Land in Lambton County, Where Sand Dunes are Killing out the Pine.

In older parts of Ontario there are larger areas of land which originally produced Red and White Pine, and which to-day are lying unproductive. These lands are sand formations and might be termed absolute forest lands. It is the prevailing conception that Ontario, south of the Muskoka boundary, is almost entirely an agricultural country, but it may be of interest to know that in what is known as the south-western peninsula of Ontario (that part south of Muskoka and west of Toronto) there are in the neighborhood of two hundred square miles of unproductive sand lands lying in separate unfenced areas, varying in size from 3,000 acres to 60 square miles. These are lands which cannot possibly be tilled with profit, but which have produced splendid crops of pine and are still capable of giving a good rental under forest management. These lands exist in parts of the following counties: Simcoe, Huron, Lambton, and Norfolk. The character of the soil is the same in all cases, very sandy. In many places the sand is blowing and shifting, although parts of these areas have a second growth of such trees as Red Pine, White Pine, Black and White Oak. In Simcoe County we have an unfenced desolate area of about sixty square miles, which was once covered with Red Pine and scattering White Pine. Some portions of this area contain a large number of pines which are acting as seed trees. The Red Pine is especially strong in reproductive power on this soil. Almost every season portions of these lands are visited with ground fires which usually destroy the young growth and injure the older seed trees.

Norfolk County presents another type of denuded land. White Pine was the most conspicuous evergreen in the original forest and the Red Pine was lacking in this locality. In some parts now the sand lands are covered with scrub oak and scattering White Pine, while in other places the sand is in a loose blowing condition.

In reforesting these unproductive lands of the province, it would not be necessary to carry on planting over the whole area. In most cases there are large portions which, if protected from ground fires, would soon seed up from neighboring trees.

In forest planting we have to deal with soils which from an agricultural standpoint would be worthless. In planting such soils it is necessary in extreme conditions to use such species as Jack Pine (Pinus Divaricate), Scotch Pine (Pinus Sylvestris), Red Pine (Pinus Resinosa). On better classes of land it may be advisable to use White Pine. In nearly every large area there exist local spots in which it might be advisable to introduce hardwoods, as Red Oak, Chestnut and Black Locust.

Fig. 2—White Pines.
a—1 Year-old Sudlin
b—2 Year-old Sudlin
c—3 Year-old Transplant
d—4 Year-old Transplant

Extreme conditions, as shown in Fig. 1, where sand blowing is extensive, render it necessary to give plants protection by planting lines of brush or other waste material to stop the shifting sand. It would also be best to use such hardy species as Jack Pine or Scotch Pine, but after a forest cover had been established it might be possible to introduce species higher in soil demands, such as White Pine.

The size of the trees used in forest planting is strikingly different from that used in orchard or ornamental planting. Owing to the small size (6 inches to 15 inches in height), it is possible to plant a large number in a day. A White Pine plant ready for final planting has been grown for two seasons in the seed bed and then has been transplanted to nursery rows for one or two years. This transplanting gives a compact plant with a root system full of fibre (Fig. 2d), thus enabling the plant to stand the rough conditions of forest planting.

Fig. 3—Planting White Pine.

The plants are taken to the planting area, placed in trenches ("heeled in") and carried from the trench by the planter in a large pail half filled with water, as in Fig. 3. A twelve quart pail will hold from 100

to 200 plants. Various methods in planting are adopted, but for light, sandy soil one man can prepare the planting hole with a spade, while the second man follows and places the plants. In heavier soils it is often necessary to clear the planting spot with a mattock, thus increasing the cost. The plants are spaced from four to five feet apart each way, thus requiring from 2,722 to 1, 742 plants per acre.

Forest plants can be grown in local nurseries or bought ready for planting. Planting material ready for final planting, in 100,000 lots, can be imported from Europe and laid down at any railway point in Ontario at the following quotations:—

White Pine	$2.00 per 1,000
Jack Pine	2.00 per 1,000
Scotch Pine	1.50 per 1,000

In estimating the initial cost of restocking land with trees, the question of labor is one of first importance. The cost of planting an acre, which is a suitable unit on which to base an estimate, will vary with the quality of the labor and with the nature of the soil to be planted. The usual type of waste land found in Ontario in large areas is either a pure sand formation, or is of a light, sandy type in a rocky formation. On

Fig. 4.—Killing of Red Pine Caused by Ground Fires in Waste Land in Simcoe County.

such lands it is quite possible for two men to replant an acre per day, while, with experience, laborers should do even better than this. Two men per acre per day is a conservative estimate.

Why reforest these lands? From the standpoint of protection it is of great importance to have such lands covered with trees, as the formation of sand dunes is threatening neighboring farm lands. Such areas, if properly covered with trees, would better conserve the water supply to small streams which have their sources in these localities.

Moreover, these lands at present are giving little, and in some cases no, taxes to the municipality in which they are located. In many cases also inexperienced persons are persuaded to buy portions of such for agricultural purposes, but they can never be profitably tilled, and unthinking settlers should be protected from making the vain attempt to derive a living from them.

It is a practical business investment for the State to reforest these lands, as it not only pays as a pure investment but also assists in insuring local industries with a future outlook for supplies of raw material.

COMMUNICATIONS.

The Canada Lumberman, Toronto.

Gentlemen,—I have noticed lately in the press of the country articles dealing with the question of the prohibition of pulpwood as though it is a new idea, and I have been interested and amused at many of the statements I have seen on the subject.

In the columns of The Lumberman in the years 1888 to 1890 this matter was discussed quite generally, and I had the temerity at that time to give my reasons and argue for the total prohibition of the export of pulpwood from Canada, and I have seen no good reason why I should change my views at any time since, though I was berated considerably by parties interested in shipping pulpwood from Canada at the time. I have felt that the discussion then carried on by The Lumberman and its correspondents was the forerunner of the later action of the Ontario Government in causing logs from Government limits to be manufactured in Canada. The pulpwood export prohibition, now so largely advocated, was not acceptable then to any noticeable extent, but the advisability of the action was quite as apparent to me then as now, and that the matter is not new now is easily shown up if your old files of The Lumberman could be examined. Time, however, is a great leveller of ideas, and I hope the follies of past days may not always continue as far as the pulp manufacture and pulpwood export questions of Canada are concerned.

Yours truly,

J. T. Schell.

Deseronto, Nov. 15, '07.

Editor Canada Lumberman:

I notice in your issue of November 1st a reprint from an American Government report dealing with the shortage of hardwoods in the United States and calling attention to the fact that it will be only a matter of a very few years at the present increasing rate of consumption until the country is entirely denuded of its deciduous trees. Now if that is true of the United States it is equally applicable to Canada. It is well known that nearly all of our valuable hardwoods are confined in their growth to a narrow belt of country running east and west and extending probably less than one hundred miles north from our frontier; only a very few varieties, such as birch and elm, being found further north. It is only a matter of twenty or thirty years ago since all of the following varieties could have been found to a more or less extent in this belt, viz., black walnut, butternut, cherry, chestnut, sycamore, whitewood, oak, maple, hickory, ash and elm; also basswood, which, although not a hardwood, is usually included in that class on account of its deciduous character.

How many of the above named hardwoods can now be found in the section of country referred to? I venture to say, of the first six mentioned, none, or, if any, only an odd tree here and there. What of the others? It is a fact that we are already purchasing most of our oak from the United States, and as that lumber enters largely into the construction of furniture, cabinet work of all kinds, interior finish, car building, etc., the quantity required for consumption in this country must amount to several millions of feet annually. Maple and ash, although not used so generally, are necessary or desirable for many purposes, and are now difficult to obtain except in small quantities and of inferior quality. Birch is the only kind of hardwood of which we can say that we still retain any considerable quantity, but it is one of the least valuable, with perhaps the exception of soft elm, mainly owing to its intractibility, it being hard to work and being almost impossible to secure perfectly straight pieces after it has been piled for a time to season, besides the logs not being floatable, it involves much trouble and expense to transport it to the point of manufacture.

Now, if the facts are as above stated, and I have good reason to believe they are, we will be in the near future face to face with a hardwood famine in Canada, without even the alternative of purchasing our supplies on the other side of the line, as that country will be similarly situated. Of course in this age of science and invention some substitute may be found for hardwoods as used in the various industries, but at the present time there is nothing of the kind in sight. Pine might be substituted, and doubtless will be in some cases, but even pine is getting scarce and dear, and in most cases would make but a poor substitute anyway.

It is generally understood that the Government is doing something in the way of reforestation as applied to pine, but I am not aware that anything is being done to preserve, or rather reproduce, our hardwoods, for it is too late to talk of preserving them when they are already gone. It is a matter that should, I think, be urged upon the Government.

Certainly there are difficulties in the way, such as the matter of expense, the land in that section of the country adapted for the purpose being mostly in the hands of private owners, and also the fact that the returns on the investment would be very remote and only future generations would reap the benefit; but that argument should not be allowed to weigh; we cannot afford to be like the Irishman who, on being urged to do something which would benefit posterity, asked: "What has posterity done for me?"

I would like to see this matter taken up and discussed in your valuable and widely read journal.

Yours truly,

John McGregor.

THE FORESTS OF NEW BRUNSWICK*

By Lieutenant-Governor Tweedie.

For many years a very large proportion of our lumber lands lay waste and uncared for. Lumber operators chose what to them seemed the most suitable timber blocks, upon which to carry on their operations. The rest remained unapplied for. While this industry was comparatively weak and of small proportions, as compared with that of to-day, it would not be expected that a government would undertake to expend large sums of money in protecting and preserving the forests, from which there was small return.

I have for years felt the necessity of more stringent measures being adopted in order to protect our forests, but lack of interest on the part of the public and insufficient means at the disposal of the Crown Land Department have prevented the carrying out of such a policy as would, in my opinion, largely tend to preserve and protect our national wealth.

Should Not be a Political Question.

In the short time at my disposal it is impossible to deal with all phases of this question. I will, therefore, confine myself to what means I consider should be taken for the purpose of the protection and preservation of the lands of the province—and here I may say that without the assistance and co-operation of the public, the representatives of the people and those engaged in the industry, any measures adopted will, in my opinion, prove abortive and ineffective. In 1906, as Premier of the province, I had the honor of introducing to the Legislature the "Public Domain Act," and I think, if its provisions are carried out, we will not be behind any other province of the Dominion in an effective forest policy. Before dealing with the provisions of that Act, let me say that this question is not and should not be a political one. All parties should endeavor to work out a policy that will inure to the benefit of the province, irrespective entirely of political faction.

The time has gone by when either party should take advantage of the usual political cries connected with the administration of our Crown timber lands. In the past, no matter what measures were adopted to protect the forest, the cry was raised, "You are injuring the poor man." The forests belong to the province and should be free to every one that chooses to operate or cut lumber. It is not uncommon to hear even now that the lumbermen of the country are monopolists—that the young men of the country are being driven out by reason of the fact that lumbermen hold all the lands and land for settlement cannot be obtained—that the smaller operator cannot compete with his richer neighbor. If heed is given to these cries, nothing will be effected and the result can only prove disastrous to the interests of the province in the years to come. The public domain of the province belongs to its people, not to any one class, and until public opinion is aroused to the importance and necessity for its immediate protection, the destruction and waste which has been carried on in the past will still continue. It is not only those who are engaged in the lumber industry that are interested—everyone in the province has a vital interest in these lands—the merchant, the agriculturist, the professional man, the mechanic, the laborer, and all others, and not only the present generation, but future generations.

Incomplete Surveys.

Now unfortunately, as I have said, those charged with the administration of the Crown Lands Department years ago ago had not the support and financial assistance that would enable them to make a thorough survey of the lands of the province. In former years, and before 1890, the surveys were made in a very incomplete way. Base lines were run years ago, but not in any systematic manner. Block lines were not run out at all, and when lands were licensed the adjoining owners ran what is known as a conventional line to suit the requirements for the time being.

The woods are full of such lines, and in the past they have proved very disturbing and have caused endless litigation. Since 1890 base lines have been run in some portions of the province and the corners of the blocks marked, but so far as regards the whole public domain there is no one in the Crown Lands office or out of it who has any correct or exact knowledge of the lands of the province. The first thing an ordinary individual would do if he were the owner of a block of forest land would be to have it surveyed, cruised, and an estimate of the quantity and quality of the lumber thereon made, and it is essential a thorough survey and classification of all our Crown lands should be made as soon as possible.

I have always been of the opinion that when the Crown licenses its timber lands the licensee is entitled to have these properly surveyed and the boundaries of each block marked. Past experience in making surveys has proved that very often there is more land in the district surveyed than appeared by the plan and maps in the Crown Lands office. Some years ago surveys were made on the Tobique and in Restigouche county, and very much more valuable timber lands were found by actual survey than were known to exist. The result was that the extra lands produced, if not sufficient to pay the whole cost of survey, at least a considerable portion of it. Another strong reason for having these lands properly surveyed is that it is much easier for the lumber cruiser or scalers of the Government to ascertain what quantity is actually cut upon Crown lands. Very frequently the claim is set up by the operator that a large portion has been cut on granted lands, and where these granted lands adjoin the licensed land of the Government, and where the lines are obliterated, it is very difficult indeed for the scaler to properly estimate the quantity liable for stumpage, and in most of such cases the benefit of the doubt is given to the operator. It would also be much easier to enforce the regulations of the Department relating to Crown lands.

Mapping Out Lands.

Again, at the time of making these surveys, competent men should be employed to classify the lands and afterwards make proper maps of the topography of the country so surveyed, which maps should show every block of land, the quality and estimated quality of lumber on it and the facilities for driving such lumber and getting it to market. It would be an easy matter then for parties applying for timber lands to obtain at the Crown Lands office all necessary information.

It may be said that this would cause a very large expenditure of public money. In my opinion, this expenditure would be entirely justifiable, and in the future the province would reap the benefit of it, as the revenues would be largely increased. The Department of Crown Lands would be enabled if this method were pursued to arrive at a correct valuation of its lands. The practice heretofore pursued is neither just to the Crown nor to the operator. Placing an abitrary upset price on every mile of ground without regard to its quality or quantity is not a correct or businesslike method.

Inadequate Regulations.

There are large quantities of land which will never arrive at a growth that will meet the requirements of the present regulations, namely —make a log 18 feet 10 inches at the top. These lands are of a thick, stubby growth and are to be found all over the country, but the quantity in proportion to first class lands is not known and is only a matter of conjecture.

Now it is apparent that the Crown should be in possession of this knowledge, so that it might intelligently deal with the pulpwood question, which is of great importance, in view of the establishment in recent years, of sulphite fibre mills.

Many intelligent and capable lumbermen hold to the idea that pulp mills are a great menace to the forest wealth of our country, and that with their greater development it is only a question of a few years when our lumber lands will be depleted. With this view I do not agree, because if a proper policy be carried out in regard to the cutting of lumber it is clear to me that pulp mills might be well supplied without doing any appreciable damage to our forest lands. One thing, however, is important, and of vast importance, and that is that on no account whatever and under no pretext should the operator be allowed to cut lumber below that allowed by the present regulations, except in cases where the land is of the stubby growth mentioned, and which would not in any event produce merchantable lumber of the regulation size.

With this latter view I know that a great many will disagree, because every proposition to curtail or limit in any way the privileges the operator formerly enjoyed necessarily is unpopular. I am fully impressed, however, with the necessity that exists to-day for a more vigorous policy in this regard and feel that if such policy is not pursued in the near future the province will eventually suffer.

*Abstract of an address delivered before the Canadian Club of St. John, N. B., Nov. 12, 1907

Waste of Hemlocks.

Hemlock timber, till very recently, was of comparatively little value, large quantities of it having each year been cut down and the bark, which is used for tanning purposes, peeled. The log, however, was left in the woods and millions of feet in nearly every section of the province have been left to rot and decay. The time has gone by for this extravagant waste and any party who peels bark now on our Crown lands should be required to take the log out of the woods. This wood has now become quite valuable. The time has arrived when indiscriminate and wasteful cutting of it should not be allowed. I am inclined to the view that in the near future hemlock will be largely used in the manufacture of the coarser kinds of paper. I know that to a certain extent it is now being used in our pulp mills and have no doubt it will be more largely used in the future.

Export of Pulpwood.

What condition would this province be in if it were not for its forest wealth? If the operator were allowed to cut the lands indiscriminately why in a very few years there would be nothing left but a waste, a howling wilderness, of no value whatever. The country would be completely demoralized and ruined, not only from a lumbering standpoint, but also from an industrial standpoint. And here I may remark that of late a great deal has been written and said throughout Canada in regard to the Government allowing our unmanufactured lumber to be shipped to the United States in the shape of rossed wood, to supply its pulp and paper mills. I agree at once that if it could be made clear that all the wood that is at present exported from this province could be profitably manufactured into paper within the province, then it would be advisable to prevent its shipment to the United States; but that is not clear, and I can see a great many difficulties in the way. Those who in this province advocate the placing of a duty and are calling upon the federal and provincial governments to pursue this policy, in my opinion, have not thoroughly considered the question. The same conditions do not exist in all the provinces—Ontario and Quebec have great water powers—and many of them. They likewise possess all the other facilities and requirements necessary for successfully manufacturing all kinds of pulp paper.

New Brunswick Lake Water Power.

New Brunswick is not so favorably situated in this respect. It has few water powers—the one at Grand Falls being the largest, and is considered by many to be the greatest power in the Dominion, east of Niagara. There is a fall of about 10,000 horse-power in Gloucester county and a very few more smaller ones in different parts of the province, so that it will be seen it is not every locality within the province where a pulp mill can be successfully started. Outside of power abundance of water is a great essential in the manufacture of pulp and paper, and unless it can be liberally supplied it is useless to talk of establishing pulp mills. Mechanical pulp mills cannot be run at a profit with steam and water power is necessary to economical running. For these reasons, therefore, we might find, if the export of the raw material were prevented in localities where mills could not be erected, quantities of pulp wood would for many years be unmarketable, and there are many districts within the province where the raw material could be supplied, but where by reason of the drawbacks I have mentioned pulp mills could not reasonably be expected to be erected. If any such mills are to be built within the province in the future they will be built where the most favorable conditions exist and where a large supply of pulpwood can be obtained; but I am of opinion that in New Brunswick the number of pulp and paper mills that will be erected will, for years to come, be small.

Reforestation.

From time to time we hear of the necessity of reforestation, but to my mind the necessity does not exist at the present time for such a policy. We have thousands of acres of land within the province where the growth is too thick and where it would be of great advantage to pursue a thinning out process, and if the lands of the province are ever classified as I have suggested I have no doubt that such a course will be adopted.

Large tracts of valuable lands have been burned over in the years gone by and which to-day are not productive. These lands might well be set apart and lumbering upon them prohibited for a number of years. Under proper supervision and protection they would in a few years become a valuable asset of the province. I think the district known as the Cains River country might properly be removed from license and protected in the way I have suggested. Millions of dollars' worth of lumber have been destroyed in this region in the past, and under proper protection, as it is a quick growing country, it would become of great value in the future.

Fire the Great Enemy.

One of the greatest enemies to our forests is fire, but fortunately since the policy of leasing the land for twenty-five years was adopted, more care has been exercised by the licensees, in consequence of which fires have not for the past 13 or 14 years been so destructive; but nearly every year, without exception, fires do occur in some portion of the timber region. It is difficult to trace the origin of these fires, but very frequently they occur through the carelessness of persons going through the woods. Oftentimes they are caused by carelessness of the stream drivers, frequently by fishing parties, and sometimes by gum pickers. Lightning very often causes a fire, but my experience is that in most cases the origin can be traced to an individual or individuals. Now that our forests lands have become so valuable it is incumbent upon us to have more stringent regulations and to take greater precautions against fire. To do this, it would be fair that both the lceinsee and the Government should contribute. There is a mutuality between the parties and the protection afforded is for the common benefit. I know that many lumbermen claim that the crown should bear all the expense of such fire protection. This view is not a reasonable one. When the Government leases streams for fishing purposes there is a provision in every lease that the lessee shall put on a number of guardians for the proper protection of such streams and shall pay their wages. There should be a regular fire service connected with the Crown Land. A competent man should have charge as chief ranger, and a sufficient number of men should be employed in each district whose duty it would be to report to the chief ranger at stated periods. These wardens should patrol their district daily during the dangerous seasons, which are generally May, part of June, October and part of November, and while danger and damage cannot absolutely be prevented, still with a proper system, energetically and practically worked out, the chances of loss may be greatly reduced.

Time will not permit of my dealing more exhaustively with the subject of forest fires. The railways have caused great damage in the past, and I regard with apprehension the construction of the Grand Trunk Pacific Railway, which, when completed, will run through a large portion of our forest land, and also of the International Railway, which runs from Campbellton to the St. John River—the whole distance of 110 miles being mainly through the most valuable Crown timber lands. Some time ago it was suggested that if power was developed at the Grand Falls that these roads might be run by electricity. If this were feasible the danger of fire would be eliminated, but I was not prepared to give an opinion upon the matter. However, if this is not feasible and the railways are operated in the usual way, the greatest care and precaution must be exercised, both by the Crown and license holders of these lands in order to provide against their destruction.

Should Adhere to Regulation Size.

I have pointed out that under no pretext whatever should any licensee be allowed to cut timber under the regulation size. I emphasize that suggestion, because in the proper enforcement of that regulation I see the mainstay of forest protection. There is no reason why the holder of licensed land, who is a pulp manufacturer, should be allowed to cut undersized lumber, and especially if there be another regulation which is suggested by the Act, namely, the operator must take out of the forest the tops of the trees. This does not mean that they will be required to take out the branches, but simply the wood—say to the diameter of four inches at the top end. If all our operators are required to do this the supply of pulp wood will be very large. If the pulp manufactuurer does not desire to make the large logs into pulp he can dispose of these to the saw-mill owner.

Overproduction.

One other word of warning I would utter, and that is against over-production. When the capabilities of our lands are thoroughly ascertained by actual survey and inspection, as I have before mentioned, it will be an easy matter for any competent man to decide what lumber might be cut annually over these lands without injury to their future growth; and the yearly crop of lumber cut should not, under any circumstances, exceed the annual capability of the lands.

IN THE REALM OF HOO-HOO

In that beautiful summer resort, Atlantic City, the sixteenth annual meeting of the Concatenated Order of Hoo-Hoo was held in September last. To Canadians this year the convention was of peculiar interest because of the election to the office of Bojum of the Supreme Nine of Mr. W. A. Hadley, of Chatham, Ont., late vice-gerent snark for Eastern Canada. To members of Canadian Hoo-Hoo Mr. Hadley's election gives promise of imparting renewed vigor to the work of the order in this country, especially when there is coupled with his name that of Mr. W. J. MacBeth, of the Parry Sound Lumber Company, Toronto, the new

W. A. Hadley,
Supreme Bojunm of America.

vice-gerent snark for Eastern Canada and Mr. Hadley's successor in office.

The complete list of officers for the Supreme Nine is as follows:
Snark of the Universe—John S. Bonner, Houston, Texas.
Senior Hoo-Hoo—John L. Alcock, Baltimore, Md.
Junior Hoo-Hoo—Wallace Everett, San Francisco, Cal.
Bojum—W. A. Hadley, Chatham, Ont.
Scrivenoter—James H. Baird, Nashville, Tenn.
Jabberwock—J. S. Hamilton, Portland, Ore.
Custocatia—J. H. Kennedy, Hattiesburg, Miss.
Arcanoper—L. E. Fuller, Chicago, Ill.
Gurdon—O. H. Rectanus, Pittsburg, Pa.
Chicago won for the next meeting in a contest with Atlanta, Ga.

John S. Bonner, the new snark, is very popular at Houston and throughout a widely extended tributary territory.

Canada's Contribution to the Supreme Nine.

Born in Chatham, Ont., July 28, 1868, Mr. Hadley has spent his life in intimate connection with the lumber industry—in fact it is said that he first saw the light where the factory of the S. A. Hadley Lumber Company now stands. Sylvester Hadley, father of the subject of this sketch, moved to Chatham from his birthplace, Pickering, Ont., in 1846, and founded the first lumber business in that town. On his death, which occurred in 1892, the firm under its present name was established, Mr. W. A. Hadley being elected secretary-treasurer of the company. A large and constantly increasing wholesale business testifies to the enterprise of the firm.

The New Vice-Gerent Snark.

An unusually popular election to the responsible position as vice-gerent snark for Eatsern Canada is that of Mr. J. W. MacBeth, well known in lumber circles as a progressive salesman and general good fellow and in Hoo-Hoo as a devotee of all that makes for the advancement of that mysterious order. "Mack" is by birth a Scotch-Canadian, his grandparents having come from Sutherlandshire, Scotland, to Canada by way of Hudson's Bay in 1812, settling in the township of West Gwillimbury, County of Simcoe, Ont. His father was the late John MacBeth, lumberman, of Gilford, Simcoe County, well known to many of the older lumbermen of Western Ontario. The son had a unique training in the lumber industry. As a boy he assisted his father in the woods, learning by experience all phases of the industry. Upon the death of the latter in 1881 the son took charge of the manufacturing part of the business, which at that time comprised two mills, one at Gilford and the other at Graighurst, Simcoe County, as well as a retail lumber, coal and wood yard—the first in Parkdale. The pine timber supply becoming exhausted, Mr. MacBeth came to Toronto in 1888 and took charge of the planing mill which had been added to the business. On the breaking of the building boom in 1892, Mr. MacBeth was one of the sufferers. He subsequently became lumber inspector and salesman, in which latter capacity he is now engaged with the Parry Sound Lumber Company. By those who know the interest Mr. MacBeth has always taken in the affairs of Hoo-Hoo it is contended that the coming year should prove one of unusual interest to the Canadian fraternity.

Hoo-Hoo in England.

The first Hoo-Hoo concatenation ever held in England took place in London, Sept. 28 last. The London Times had this to say of the gathering:

"A most remarkable demonstration occurred last night in Q street at half after nine o'clock. It was called a concatenation of Hoo-Hoos, being apparently an imitation of the manner after which members of that tribe of American Indians disport themselves. The ceremonies were in charge of a person named Sondheimer from Memphis, America. The proceedings were in secret, but constables from Scotland Yard who have investigated are in possession of important clues that the affair was unusual. It is said that the programme was most American, being lack-

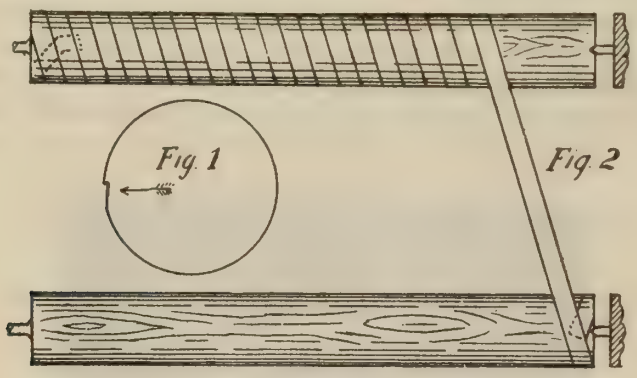
W. J. McBeth,
Vicegerent Snark for Eastern Canada.

ing in dignity and apparently purposed for mere amusement. A number of gentlemen engaged in the board trade were guests of honor, but the reception accorded them was most extraordinary. Rather than being themselves entertained by this American person, they were made to sing and relate amusing incidents. During the evening much was said about 'the gardens right and lift' and 'the onion bed,' whereas it is well known that there are no gardens in Q street and that under no circumstances would the authorities tolerate an onion bed in that very respectable neighborhood."

Veneering Wood Columns.

Veneering ordinary columns is work that can be made very tedious, yet is in fact possible of easy accomplisment. "Some months ago," says a writer in "The Woodworker" there was illustrated in "Veneers" the old-time method of doing this work laboriously with a tin caul or form to fit around the column, which is good, but too slow for most practical uses, where large numbers of columns are veneered. Take mantel work, the making of pedestals or veneered columns for millwork; it can be done much more easily.

"The first start towards the column, of course, is to make up the body or core. This is always built up, preferably hollow, but in any case always built up out of two or more pieces of wood. To turn columns out of solid wood is to invite trouble through swelling and shrinking. To avoid this and get a better job generally, the lighter columns are built up with strips of common lumber of any kind, and then turned to the exact size wanted. If columns are 4-in. and over in diameter, the usual practice is to build them in box form, leaving them hollow in the centre, and just getting enough wood around the outside to make them substantial. Often they are made of staves matched together edgewise, sometimes one way and sometimes another, and occasionally one cannot help but think that cores from the veneer machines could be used in a lot of this work by boring out the center. Of course, there is a little more danger from swelling and shrinking than when a column is built with several pieces, but still it looks as if one might make a pretty fair column out of veneer cores by boring, and then thoroughly drying them.



HOW IT IS DONE.

But that's aside from the main question of veneering the columns. The columns for veneer are all turned just as if they were going to be used without further facing. Then they are taken to the glue room, and the veneer is gotten out ot the right dimensions for the columns to be faced. If it is a small column, anything from 4-in. down, it is comparatively easy to get the veneer for each column in a single piece so that there is no matching up at all. For larger columns, of course, the veneer must be matched up and jointed and fastened together with tape, just the same as in panel work, after which it is used as one sheet. Then two men usually do the work, one doing the gluing, the other clamping the veneer.

Before spreading the veneer with glue it is usually moistened on the face or outside with a cloth or sponge, dipped in water, to make it bend easily and prevent cracking; and sometimes, after being moistened, it is held over a steam jet for a minute, or heated up in some way, to further prepare it for ease and safety in bending around the column. The outside surface of the column and the inside surface of the veneer are then carefully spread with glue, not too thick, because there is not as good a chance to squeeze surplus glue out of a joint of this kind, as in making flat work, but carefully spread all over, and rather thinly mixed, so that the glue body may not be too heavy. After the glue is spread, the man who does this work at the table or work bench, rolls the veneer around the column, first tacking one edge at each end, then drawing the other around, and lapping it over for an inch or so and putting a tack in it at each end to hold it in place, after which he passes the column to the other man, who does what would be termed press work.

The press work on ordinary columns, however, does not involve the use of a press at all, but may be most easily done by using the irons—that is, the head and tailstock of two simple turning lathes. The explanation of this comes from the fact that the veneer is drawn tight to the column and held in place by winding with a strip of heavy canvas about 2-in. wide, wound spirally from end to end, and drawn tight enough in the process of winding to hold the veneer firmly up to the column. To start the winding, one end of this strip is tacked to the column at one end, and then the lathe is started on slow speed, and by holding the strip in the hand, the man can put as much tension or pressure on it as he thinks is required, and run it on spirally, coming out at the other end and lapping back a few times, then tacking the canvas down again. No clamps or presses are used at all, but there is a sort of sleeve in which the column may be run at the head end to hold the veneer down a little during the wrapping.

It may seem from this that one lathe would be all that the work would call for, but really the use of two helps out considerably. The two are mounted practically on the same bench, one just back of the other, the back one being just an idle or holding lathe. The exact position is illustrated in Fig. 2. The advantage and usefulness of this combination comes from the fact that those columns which have been laid aside and on which glue has set must, of course, have the tape or canvas strip unwound from them, and by putting these columns in the back lathe, two birds may be killed with one stone, so to speak; the canvas from one is wound off on to the fresh one, being put in the driven lathe. It is started off by hand, and the end brought across and nailed to the freshly-glued column in the lathe, then the lathe is started, and the strip of canvas, being wound spirally on the first one, naturally in unwinding winds itself spirally on the other one; the tension or tightness of the winding may be regulated by tightening the one that is being unwound in the lathe, so that it pulls as heavily as may be necessary. When the canvas is wound off it on to the fresh one, the last end is tacked and both are ready to come out of the lathe, the operation being repeated on two others. It's a very simple matter, and only takes about a minute to unwind an ordinary column. The exact speed, of course, depends on the skill of the workmen, but it is so simple and easy compared to the old, laborious manner of clamping in a tin form, that the old way is hardly to be thought of where numbers of columns are made regularly.

The veneer, as has been stated incidently before, does not joint together, but laps over to make the joint, and the outside veneer is chamfered down in the process of finishing, so that it is really a lapped joint. Naturally, too, in making a joint of this kind, there is not much room for the surface glue to get out except that which runs out endwise in front of the winding, so care should be exercised so as not to get the glue too thick, and at the same time it should be thick enough to ensure a good joint.

This method of jointing veneer on columns by lapping it over answers for most general purposes, because columns used in mantel work, frequently in mill work, have the back close to some other work, so that this joint can be turned behind and is not visible. Where it is desired to make a neater job, the edge of the under veneer in this lap is cut into the core, so that the top piece, when lapped over and finished down, does not leave a hump. The method of fitting the veneer to the core is illustrated in Fig. 1. Another method is to carefully joint the veneer together, but this is a little hard to do when wound with canvas as described above. Where the old form is used there is generally an open space at the top, where the lap can be gotten at and trimmed to a joint and carefully matched down. This method, however, takes so much time and work that the usual practice is to lap over, and where the lower or starting edge of the veneer is carefully notched into the core, a very neat job can be made.

Veneer used for columns is practically always 1/20 stock, either sawed or cut. The cut veneer is less expensive, and when the cutting is properly done and put on with the right side up, it is difficult for even an expert to tell, after it is finished, whether it is cut or sawed. Sometimes, however, in matching up on large work it is desired to turn one sheet of veneer with one side out and one with the other out, to get an exact match of figure. This can be done with sawed veneer, but not with cut. However, in column work this is not as important as in panels, because the main point is to get a figure that harmonizes and runs in the same general direction, and this can usually be gotten out of cut veneer. Matching up crotches and things of that kind are not called for in column work as they are in panels, so cut veneer can be used very nicely.

SAFETY LOADS FOR PINE.

The accompanying tables for pine and fir timbers were computed by W. P. Cowles, engineer for the Department of Buildings, Minneapolis, for his personal use, but as there have been a number of requests for copies by architects and contractors, permission to publish them was secured by "The Improvement Bulletin," to whom we are indebted for their reproduction. The tables are figured on stock sizes and on a factor of safety of six, and are not complete in detail in that the deflection co-efficients to be used in connection with the tables have not as yet been completed. These deflection co-efficients will be published later. However, the loads given in the tables will not produce a deflection enough to crack plaster.

Those who have had access to these tables have found them of great assistance in figuring out work along these lines, and there have been a number of suggestions that they be reproduced in print for the benefit of others.

A CHINESE SCHOOL OF FORESTRY.

The almost world-wide movement to protect and establish forests has reached China, and the first Chinese school of foresty will shortly be opened in Mukden, according to a recent report by Consul-General James W. Ragsdale, at Tientsin.

The Chinese Empire is sometimes pointed out as the worst example, among modern nations, of forest destruction. The floods which are periodically poured down from the denuded mountains are destructive beyond comparison with those of any other country, and the want of forests is assigned as the chief cause.

Wood is scarcer in China than in almost any other inhabited region of the world, although the country is well adapted to the growing of trees. In establishing of a forest school the Chinese Government gives evidence, that it realizes the need of beginning its reforestation in a scientific manner.

SAFE LIVE & DEAD LOADS IN LBS. PER. SQUARE FOOT, FOR FLOOR JOIST.

SIZE	CENTER	SPAN IN FEET. P=PINE, F=FIR																									
		8'		10'		12'		14'		15'		16'		17'		18'		19'		20'		21'		22'		23'		24'	
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F
2"×4"	12	46	77	30	50	20	33	15	25	13	22	11	18	10	17	9	15												
	16	35	58	22	37	15	25	11	18	10	17	9	15	8	13	7	12												
	18	31	52	20	33	13	22	10	17	9	15	8	13	7	12	6	10												
2"×6"	12	109	180	69	115	48	80	35	58	31	52	27	45	24	40	21	35	19	32	17	28	16	27	14	23	13	22	12	20
	16	81	135	52	87	36	60	27	45	23	38	20	33	18	30	16	27	14	23	13	22	12	20	11	18	10	17	9	15
	18	73	124	46	77	32	53	24	40	20	33	18	30	16	27	14	23	13	22	11	18	10	17	9½	16	9	15	8	13
2"×8"	12	197	328	126	210	88	147	65	108	56	93	50	83	44	73	39	65	35	58	31	52	29	48	26	43	24	40	22	37
	16	148	246	95	158	66	110	48	80	42	70	37	62	33	55	29	48	26	43	24	40	21	35	20	33	18	30	16	27
	18	132	220	84	140	58	96	43	72	37	62	33	55	29	48	26	43	23	38	21	35	19	32	17	28	16	27	14	23
2"×10"	12	310	516	200	331	139	230	102	170	89	148	78	130	69	115	62	103	55	91	50	83	45	75	41	67	38	63	35	58
	16	234	390	150	225	104	174	76	127	66	110	59	98	52	87	46	77	42	70	38	63	34	57	31	52	28	47	26	43
	18	210	350	133	220	93	155	68	113	60	100	52	87	46	77	41	67	37	62	33	55	30	50	28	47	27	45	23	38
2"×12"	12	455	760	290	482	200	331	148	246	129	215	113	188	100	167	90	150	80	133	73	124	66	110	60	100	55	91	50	83
	16	340	567	217	361	151	250	110	183	97	162	85	142	75	125	67	111	60	100	54	90	49	82	45	75	41	67	38	63
	18	300	500	193	320	134	224	98	163	86	143	75	125	67	111	60	100	53	88	48	80	44	73	40	67	37	62	33	55
2"×14"	12	620	1030	398	662	276	460	201	334	176	294	155	258	137	238	123	205	110	183	100	167	90	150	82	137	75	125	69	115
	16	470	784	298	496	208	246	154	256	132	220	116	193	103	172	92	153	82	137	74	123	68	113	62	103	56	93	52	87
	18	415	690	264	440	184	306	135	222	118	197	103	173	92	153	82	137	73	124	66	110	60	100	55	91	50	83	46	77
2"×16"	12	815	1355	522	870	362	604	266	442	231	384	204	340	180	300	160	266	145	242	130	216	118	197	107	178	99	165	90	150
	16	610	1015	390	650	270	450	199	332	174	290	152	254	135	222	120	200	108	180	98	163	89	148	81	135	74	123	68	113
	18	540	900	346	567	240	400	177	295	154	257	135	222	120	200	107	178	96	160	87	145	79	132	72	120	66	110	60	100

W. P. Cowles.

SAFE UNIT, LIVE AND DEAD LOADS IN LBS. PER. SQUARE F.T. ON FLOOR AREA.

DEPTH OF BEAM.	P=PINE F=FIR SPAN OF BEAMS IN FEET.																												
		8'		10'		12'		14'		15'		16'		17'		18'		19'		20'		21'		22'		23'		24'	
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F
	4"	46	77	30	50	20	33	15	25	13	22	11	18	10	17	9	15												
	6"	109	180	69	115	48	80	35	58	31	52	27	45	24	40	21	35	19	32	17	28	16	27	14	23	13	22	12	20
	8"	197	328	126	210	88	147	65	108	56	93	50	83	44	73	39	65	35	58	31	52	29	48	26	43	24	40	22	37
	10"	310	516	200	331	139	230	102	170	89	148	78	130	69	115	62	103	55	91	50	83	45	75	41	67	38	63	35	58
	12"	455	760	290	482	200	331	148	246	129	215	113	188	100	167	90	150	80	133	73	124	66	110	60	100	55	91	50	83
	14"	620	1030	398	662	276	460	201	334	176	294	155	258	137	238	123	205	110	183	100	167	90	150	82	137	75	125	69	115
	16"	815	1355	522	870	362	604	266	442	231	384	204	340	180	300	160	266	145	242	130	216	118	197	107	178	99	165	90	150
	18"	1040	1730	664	1100	464	766	338	562	284	473	259	432	230	384	220	366	184	307	165	275	150	250	137	229	125	208	115	192

COEFFICIENT TABLE

CTR. TO CTR OF BEAMS	WIDTH OF BEAMS IN INCHES. 4"	6"	8"	10"	12"	14"	16"	18"	CTR TO CTR OF BEAMS	4"	6"	8"	10"	12"	14"	16"	18"	CTR TO CTR OF BEAMS	4"	6"	8"	10"	12"	14"	16"	18"
2"	1.143	1.715	2.28	2.86	3.43	4.00	4.60	5.04	7"	.327	.48	.65	.82	.982	1.14	1.31	1.44	16"	.143	.214	.285	.357	.427	.500	.574	.63
3"	.762	1.142	1.52	1.90	2.29	2.66	3.03	3.36	8"	.286	.439	.572	.715	.858	1.00	1.15	1.26	17"	.135	.202	.269	.336	.405	.47	.54	.59
3½"	.655	.982	1.3	1.63	1.96	2.28	2.63	2.88	9"	.254	.38	.51	.635	.762	.89	1.02	1.12	18"	.127	.19	.254	.318	.38	.445	.51	.56
4"	.572	.857	1.14	1.43	1.72	2.0	2.3	2.52	10"	.228	.343	.457	.571	.685	.80	.92	1.01	19"	.120	.18	.24	.30	.36	.42	.482	.53
4½"	.507	.765	1.01	1.27	1.52	1.78	2.04	2.24	11"	.208	.312	.415	.52	.622	.727	.835	.915	20"	.114	.171	.228	.286	.342	.40	.46	.502
5"	.457	.687	.914	1.14	1.37	1.60	1.84	2.02	12"	.19	.286	.38	.476	.57	.667	.767	.837	21"	.110	.163	.217	.27	.326	.38	.437	.48
5½"	.416	.625	.83	1.03	1.25	1.45	1.67	1.83	13"	.176	.264	.35	.44	.527	.615	.71	.775	22"	.104	.156	.21	.26	.31	.364	.42	.457
6"	.382	.574	.76	.954	1.14	1.33	1.53	1.68	14"	.163	.245	.326	.41	.49	.57	.657	.72	23"	.10	.149	.198	.249	.298	.348	.40	.44
6½"	.352	.527	.704	.856	1.06	1.23	1.43	1.55	15"	.152	.228	.304	.38	.457	.532	.612	.672	24"	.095	.143	.19	.238	.285	.334	.38	.42

To find the safe live and dead load per square foot of floor area, take the safe unit load from depth and span, and multiply by coefficient from width and centre to centre.

W. P. Cowles.

VICTORY FOR LUMBERMEN.

The courts of Seattle, Washington, have granted a temporary injunction in favor of the Washington and Oregon Lumbermen's Association against the new freight rates.

The proposal of the railway companies was to advance rates twenty per cent. over the northern lines. Attorneys for the railway companies moved that the proceedings be dismissed, on the ground that the court had no jurisdiction. Judge Hanford, however, overruled this motion, but has now given his final decision, which is in favor of the lumbermen.

The case is one of the most famous in the history of the lumber trade in the Pacific Northwest. Nearly twenty affidavits from lumbermen were put in, all tending to show that the enforcement of the proposed tariffs meant ruin to them. According to that of J. H. Bloedel, manager of the Larsen Lumber Company at Bellingham, the haul from Canadian points in the Northwest to Canadian points in the middle west was longer by far than the haul from Bellingham to St. Paul, yet the rate charged for the latter haul was much higher.

"Under the new tariff," testified Mr. Bloedel, "our rates are also raised from 40 to 50 cents beginning at Coast American points into the Northwest Territory of Canada. Rates, however, via the Great Northern Railway remain unchanged from British Columbia points via the American roads, in bond, and back to Canadian Territory, i. e., rates from Vancouver and New Westminster via the Great Northern Railway and into Winnipeg via the Canadian Northern Railway remain 40 cents per 100 pounds. Rates via the Great Northern Railway, covering a portion of the same line, from Blaine or Bellingham, Wash., to American points in North Dakota or Minnesota are 50 cents per 100 pounds.

"Rates from the interior of British Columbia, such as Rossland, via the Spokane Falls & Northern and the Great Northern eastward and the Canadian Northern into Winnipeg are 34 cents. The rates from American points along the same routes, as Spokane to Devil's Lake, Grand Forks, etc., this side of the Canadian line, are 42 cents. In each of the above instances the Canadian haul exceeds the American haul from 20 to 400 miles, and yet the rate is from 8 to 10 cents lower." "

JEFFREY SWITCHING LOCOMOTIVE.

The accompanying illustration shows a view of a 25 ton switching locomotive, built by the Jeffrey Manufacturing Company, of Columbus, Ohio, for use in handling freight cars for the Cerveceria Cuauhtenoc Brewery of Monterey, Mexico. This style locomotive takes the same

Twenty-Five Ton Jeffrey Switching Locomotive.

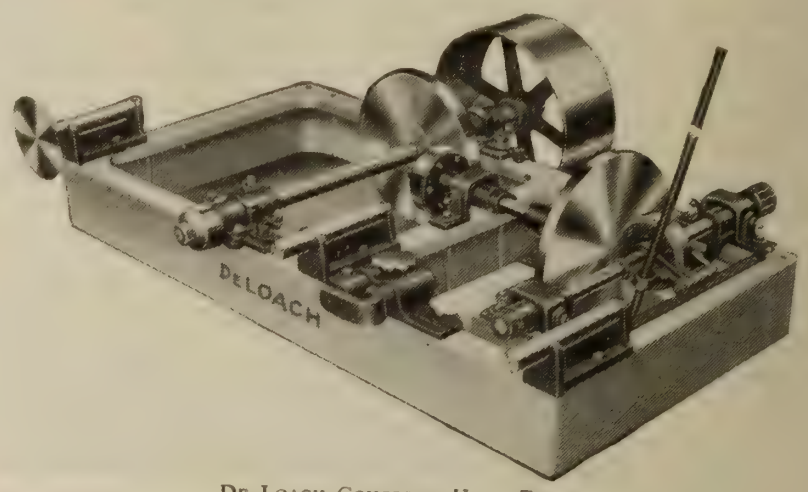
electrical equipment as the mine type, the only changes being in the side and end frames and the addition of a platform and suitable cab to accommodate the conditions incident to surface work. The motors are of the waterproof steel frame type, having drum wound armatures, laminated pole pieces, oil lubrication with auxiliary grease boxes and liberal wearing surfaces.

These locomotives are built in sizes from 10 to 30 tons with two motors, and in larger sizes with three and four motors, arranged with rigid frame or with double trucks having flexible wheel base, depending entirely on the conditions.

DeLOACH MANUFACTURING COMPANY.

The De Loach Mill Manufacturing Company have again demonstrated their right to a place in the front rank of up-to-date manufacturers. The sawmill husk frame, above illustrated, is made of reinforced concrete and, we believe, marks the first adaptation of this wonderful material to the uses of portable machinery.

We feel, moreover, that this subject is of unusual interest to our readers, and that the company's claim for the utility, strength and rigidity of their new husk frame is worthy of earnest consideration. The manufacturers claim that, notwithstanding the fact that they have prob-



De Loach Concrete Husk Frame.

ably been responsible for the clearing of more forest lands than any other corporation, they have at the same time ever stood for the judicious conservation of our forests.

For full information, and descriptive circulars of this new husk frame, and of the company's full line of saw mills, shingle mills, planers, gang edgers, lath mills, grinding mills, water wheels, engines, boilers and gasoline engines, address the De Loach Mill Minufacturing Company.

To those at all familiar with the marvels recently wrought by the introduction of reinforced concrete into structural building, its adaptation for portable machinery purposes will come as no surprise. The manufacturers claim to have introduced concrete husk frames because they are cheaper, lighter, and more lasting than iron, while being just as strong, and retaining their shape better. They are also very liitle heavier than wood.

A LUMBERMAN'S OPINION OF THE JAP.

Mr. Albert MacLaren, Buckingham, Que., who has had considerable experience with the Japanese in British Columbia, is of the opinion that the white residents of the far western province are making a grave mistake in attempting to drive the Japanese and Hindus out of the country or to prevent them from landing. The James McLaren Lumber Company, which has mills at Buckingham, Quebec and Vancouver, B. C., have employed many Japanese in the past two years, and Mr. MacLaren states that the foreigners have always given the best satisfaction and that British Columbia needs the Japanese to develop her wonderful resources, "White men," said Mr. MacLaren, "are preferable certainly, but there are not enough whites in British Columbia to keep up the tremendous pace that the province has been making. We have many Japanese in our mills out there, although the white employes are in the majority. The Japanese have never failed to do their work, but there is no danger of the Japanese preventing white men from geting employment; there is undoubtedly plenty of work in British Columbia for all hands. Canada needs these Japanese."

Wanted and For Sale Department

PUBLISHERS' NOTICE

Advertisements inserted in this department at the rate of 15 cents per line each insertion, in advance. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. Fourteen lines make one inch Advertisements must be received not later than the 12th and 28th of each month to insure insertion in the subsequent issue

FOR SALE

ABOUT 100 M. PINE—ABOUT 1/5 WHITE pine—can be cut to order. Write for particulars. S. SMITH, Silver Hill, Ontario

WANTED — TEN THOUSAND CORDS Hard and Soft Wood; also same quantity of Slabs. SIMCOE WOOD AND LUMBER CO., 52 Yonge Street Arcade, Toronto.

WE HAVE FOR SALE A FEW CARS OF cedar posts and shingles, pine lath, clear face and better red pine and a good quantity of white pine and spruce lumber. JOHN HARRIS & SONS CO., Saw and Planing Mills, Owen Sound, Ont.

HAVE YOU ANY STOCK YOU WISH TO SELL? If so make the fact known to probable buyers by placing an advertisement in the "Wanted and For Sale Department." Address CANADA LUMBERMAN, Toronto.

WANTED

A POSITION AS YARD SUPERINTENDENT or inspector with knowledge of export and Tonawanda grades in pine and hardwood lumber. Address Box 566 CANADA LUMBERMAN, Toronto.

A CROWN LAND SURVEYOR AND Lumber Cruiser of long experience wants to be placed in touch with parties who are desirous of investing in lumber lands in Alberta or British Columbia. Can furnish good references. Address Timber, care CANADA LUMBERMAN, Toronto.

FOR SALE

No 1 Spruce Lath 4' x 1½" x 3/8".
Spruce 3 x 4, 3 x 5, 3 x 6, 3 x 7, from 1 to 5 cars of each
Also 3" Fourths and 3" Ends.
Box 64, BATHURST, N B.

FOR SALE

I AM PREPARED TO DELIVER F.O.B. cars here 2,000,000 feet cedar logs cut to order into any size timbers from 4" x 4" to 12" x 12", and from 8 to 20 feet long, any time up to next May; 3,000 telegraph poles. Correspondence solicited. J. B. WINLAW, Winlaw, B. C.

FOR SALE

A GREAT MANUFACTURING SITE FOR Pulpwood Mill or large Saw Mill; with excellent large water power already developed. Also complete saw mill and planing mill with about four million feet of lumber, shingles, lath, dressed lumber. Complete outfit of Lumber Camp for about one hundred men; and the most attractive town site in New Ontario. Situated in the Town of Charlton. Good time to get at bottom price. Apply Box No. 1, New Liskeard, Ont.

For Sale

1" Maple Hard	336,000	ft.
1¼" " "	8,300	"
2" " "	37,000	"
1" Brown Ash	150,000	"
1" Red Oak	39,000	"
1 " "	3,900	"
1½" "	2,700	"
2" "	4,200	"
1" Soft Elm	75,000	"
1½" "	9,600	"
2" "	29,800	"
1" Birch	210,000	"
1½" Beech	2,400	"
2" "	16,500	"

Write HASKELL LUMBER Co. Limited, Fassett, Que.

LUMBER BUSINESS FOR SALE

THE EXECUTORS OF THE ESTATE OF the late W. H. Crow of Welland, Ont., offer for sale the lumber and coal business lately carried on by him. This is without doubt one of the best opportunities to secure a live going business. The Town of Welland is growing rapidly and the outlook for trade in the Town is very bright. This yard has done a large proportion of the trade of the Town. The stock on hand is well sorted and well bought and amounts to about $20,000. Intending purchasers will be given every chance to satisfy themselves as to the amount of business that has been done and the value of the stock on hand. Address all communications to GERMAN & PETTIT, Solicitors for the Executors, Welland.

FOR SALE—SAWMILL AND TIMBER Limits, Mill on lake, in good running order, capacity 15 M.; three saw edger, trimmer, log jack, horses, sleighs, lumbering tools, &c, 2,000 acres of timber, Hardwood, Hemlock, Spruce and Balsam, on boundry between Muskoka and Parry Sound; Good new house, barn, office and blacksmith shop, also ½ million ft. Birch and Hemlock Lumber, With or without Lumber. Good reasons for selling. Apply Box 546, CANADA LUMBERMAN, Toronto.

WANTED

CASH PAID FOR BASSWOOD, ASH, PINE and hemlock and other lumber. Send list of what you have and prices to Box 551, CANADA LUMBERMAN, Toronto.

WANTED

POSITION AS BOOKKEEPER BY CAPABLE young man, with three years' experience in lumber office. Best of references. Address Box 347, CANADA LUMBERMAN, Winnipeg.

Wanted

ONE TO TWO MILLION FEET WINTER cut Basswood. Sawing specification furnished upon request. Apply Box 555, CANADA LUMBERMAN, Toronto.

FOR SALE—60 M 4/4 HARD MAPLE. 11 M 6/4 Beech. 6 M Birch and Elm Turning Squares. 9 M 4/4 Birch. 6 M Hardwood Hearts, Squares. O. B. cars, Wiarton, Ont. A. P. EBERT, Wiarton, Ont.

FOR SALE

Small Car 1½", 2" and 3" Clear Pine.
1 Car 1" good C & B. Soft Elm.
25,000 ft. W. Oak, will cut to order in squares 6"x6" to 24"x24" up to 40 ft.
Lock Box 62, Dunnville, Ont.

FOR SALE

SAW MILL MACHINERY
Ten by Sixteen Engine.
Forty-six inch Boiler.
Circular Saws.
Belting, Shafting, Carriage.
Planer and Shingle Mill
Seven Hundred Dollars for quick Sale.
Box 87, Aurora, Ont.

TENDERS FOR

Pulpwood Concessions

TENDERS WILL BE RECEIVED BY THE undersigned up to and including the 16th of December next for the right to cut pulpwood on certain areas tributary to the Nepigon River, in the District of Thunder Bay, and Rainy Lake, in the District of Rainy River, and make the same into paper. Tenderers should state the amount they are prepared to pay as bonus in addition to such dues as may from time to time be fixed for the right to operate a paper making industry on the areas referred to Separate tenders must be made for each area or territory, and the successful tenderers will be required to erect a mill or mills on each of the territories or in such other localities as may be approved by the Government of Ontario.

Parties tendering for the pulpwood rights shall accompany their tenders with a marked cheque for 25% of the amount tendered, payable to the Treasurer of Ontario, and to be forfeited in the event of their failing to enter into agreements to carry out conditions, etc

With respect to the Rainy Lake Pulp Concession, tenderers will be required to make a tender for the right to cut the pine, tamarac and cedar on the territory offered. Parties making tender for these timbers to state the amount they are prepared to pay per thousand feet B.M. as bonus in addition to Crown dues of $2 00 per thousand feet B M A marked cheque for $5,000 00 payable to the Treasurer of Ontario, must accompany the tender for pine timber, and to be forfeited in the event of their failing to enter into agreements to carry out conditions etc.

No timber shall be cut on either of the Concessions of a less diameter than 9 inches, 2 feet from the ground.

The successful tenderers to enter into agreements with the Government for the erection of the mills, expenditure of money etc.

For full particulars as to the conditions, etc. application should be made to the undersigned.

HON. F COCHRANE,
Minister of Lands,
Toronto, Oct. 16th, 1907. Forests and Mines

N. B.—No unauthorized publication of this notice will be paid for.

YOUNG LUMBERMAN

KNOWING THOROUGHLY THE WORK of woods, mill, yard and office up to general superintendent, wishes position either on salary or share of profits, married: wide experience: now employed as general superintendent. Address Box 542 CANADA LUMBERMAN, Toronto.

WANTED

POSITION AS MANAGER OF LUMBER business thorough experience from the stump to consumer, in every branch Best of references. Box 345 CANADA LUMBERMAN, Toronto.

FOR SALE

CORLISS ENGINE, FROM 300 to 400 H P.; all complete; used less than one year. Will sell at a bargain. Apply Box 554, CANADA LUMBERMAN, Toronto.

FOR SALE

WHITE AND RED OAK PLANK, ALSO several carloads of oak squares, running from 18 in. to 8 ft. long. Address Box 451, Woodstock, Ontario.

FOR SALE

200,000 to 300,000 FT. 1" AND 2" NO 1 SPRUCE Lumber, could be dressed to order before shipping. Write for prices, 8 cent rate to Toronto. Apply Box 552, CANADA LUMBERMAN, Toronto.

FOR SALE

TWO MILLION FEET HEMLOCK ON shore of Georgian Bay from 10 to 26 feet long. State highest price delivered in booms. Address, A B. CANADA LUMBERMAN, Toronto.

8,000 Acres of B.C. Timber

LANDS FOR SALE COMPRISING CEDAR, fir, Spruce, Cypress, situated 100 miles from Vancouver, easily logged by lake and river to salt water. Writer owner, W.A.SIMPSON, 744 Davie St., Vancouver

For Sale

SAW MILL AND ABOUT 45 ACRES OF good Timbered bush, also lath and shingle machine, capacity 10,000 per day, within 2 miles of C.P R. and 4 miles of G.T R. stations. Apply to J. D GREENLEES, Alliston.

For Sale

150 green White Oak Piles.
1 car load Hard Maple and Beech squares.
Dry clear stock cut 1½" and 2", 20" to 4 ft. long.
1 car load 1½" and 2" Elm C. & B. dry stock.
P. D. CAMPBELL, Northwood, Ontario.

WANTED AT ONCE

PORTABLE SAW MILL TO BE IN FIRST class order, Engine, at least 75 Horse Power; Boiler, at least 90 to 100 Horse Power; Boiler to stand 150 lbs. cold water pressure, and be in good condition thereafter. Edger and Trimmers, with Shafting, Belts, etc. State lowest cash price f.o.b. car shipping point. Apply Box No. 355 CANADA LUMBERMAN, Toronto, Ont

FOR SALE

TEN TIMBER LIMITS IN THE INTERIOR of British Columbia Timber on water and can be floated to main line of the C. P. Ry. Good logging ground. Will cruise over 85 million with 80 per cent good cedar balance fir, white pine and spruce Limits have additional over 30,000 telegraph poles on or adjacent to water Timber can be shown at any time. Price only $15,000.00 with license paid for one year.
Address 556 c/o CANADA LUMBERMAN, Toronto.

FOR SALE
AT MIDLAND, ONT.

416,000 ft. 4/4 x 4" and up, Common White Pine.
20,000 ft. 5/4 x 4" and up. " " "
41,000 ft. 5/4 x 4" and up, No. 1 Mill Culls White Pine.
45,000 ft. 8/4 x 4" and up, No. 1 Mill Culls White Pine.
925,000 ft. No. 1 White Pine Lath, 4 ft.
425,000 ft No 2 " " " 4 ft.
360,000 ft No 3 " " " 4 ft.
Your inquiries solicited.
MERSHON, SCHUETTE, PARKER & Co.,
Saginaw, Mich.

FOR SALE

COMPLETE OUTFIT OF MODERN machinery for the manufacture of
Hardwood Flooring.
Beliot Pattern Flooring Machine.
Hoyt Pattern Matcher.
Fay Egan Double strip surfacer and planer.
Fay Egan Band Rip Saw machiner. 4" saws can also be used as re-saw.
Sherman End-Matcher and Boring machine.
Broken Roll Single Surfacer.
Buzz Planer, Turning Lathe, Etc.
All the very latest style of tools and in good order Practically new. Apply to J. S. FINDLAY, Owen Sound, Ontario.

FOR SALE

LUMBER YARD AND OFFICES AND FIXTURES of a Wholesale and Retail Lumber Business in a first class town. This is a first class going concern of old established business and in one of the best towns in Ontario, enjoying a good farmers' as well as town trade.

Reason for selling is to go to British Columbia to operate Timber Limits secured there.

For information inquire at Box 553, CANADA LUMBERMAN, Toronto.

FOR SALE

2,000,000 FT. WHITE AND RED PINE AND Spruce; 500,000 Laths. P. O. Box 52, Chapleau, Ontario.

WANTED—6/4" AND 2" C. & B. BASSWOOD, Black and White Ash, Rock Elm and Beech; 1" and 5/4" Cull Basswood and Spruce 2½' Birch C & B. R. E. KINSMAN LUMBER Co., Limited, Hamilton, Ontario.

FOR SALE CHEAP

NEW SAW MILL 18 TO 20 M CAPACITY, modern throughout, Price for quick sale $1,150, must be sold address "MILL" CANADA LUMBERMAN, Toronto

WANTED

MAN WELL POSTED IN RETAIL LUMBER Business. Must be able to figure bills from Plans, etc Apply with references to JOHN PIGGOTT & SONS, (Lumbermen) Chatham Ontario.

LUMBER WANTED

WE WANT 100 CARS OF LUMBER EACH week to Dress and Match, resaw, make into flooring, in transit We have the best American Machinery, and guarantee satisfaction TAIT-CARSS LUMBER Co, Orillia.

FOR SALE

An exceptionally fine sawmill at Sarnia, Ont. complete in every detail including power.

BAND RESAWS

96" McDonough band resaw, wheels 12" face.
72" McDonough band resaw, wheels 8" face.
54" Gilbert band resaw, wheels 5-½" face.
50" Fay and Egan band resaw, wheels 5" face.
42" Fay and Egan band resaw, wheels 5" face

CIRCULAR RESAWS.

56" Benjamin and Fisher, circular.
48" Joslin circular, $175.00.
48" Smith circular
36" Walker, circular.

MISCELLANEOUS.

2 Greenlee iron frame self feed rip tables.
Williamsport self feed rip table.
Allen iron frame swing saw, NEW, $37.50.
45 two wheel lumber buggies.
10" Houston four side sticker.
Frank double spindle shaper.
Atlantic [illegible] hop tenoner.
42" Mil[illegible] three-drum sander.
Challon[illegible] block shingle machine.

DUST COLLECTORS.

86" dust collector.
54" dust collector.

EXHAUST FANS

100" Sturtevant, outlet 33¼ [illegible] ½".
80" Buffalo steel plate fan [illegible] nnected to 5½" x 7" vertical engine.
76" Sturtevant, outlet 25" x
70" Sturtevant double exhau
60" Buffalo, double outlet 19"
60" Sturtevant, outlet 22¾" dia.
30" Huyett and Smith No. 5, double [illegible] ⅛" x 15"
24" Garden City, outlet 10¾" x 10".

BLOWERS

96" No. 12 Sturtevant, outlet 36" x 36".
63" Boston, outlet 17¾" diam.
60" Ruble, two outlets 9½" diam.
54" Sturtevant, No. 8, Monogram, outlet 18½" diam
Pittsburg three-quarter housed.
46" No 6, Sturtevant, outlet 10⅛" diam.
43" No. 8 Buffalo, 8½" diam
40" No. 7 Champion blower, 11⅛" diam.

DRY KILN APPARATUS.

Sturtevant hot blast apparatus consisting of two 11' Sturtevant fans, direct connected to 10" x 12" Sturtevant horizontal engine. Each fan has set of heating coils containing about 3,200 ft. of 1" pipe.
Sturtevant dry kiln outfit, with 96" fan and coil, containing 4,900 ft. of 1" pipe.
Sturtevant dry kiln outfit, consisting of a 72" fan and coil, containing about 3,600 ft. of 1" pipe
Dry kiln outfit, with 10' 6" Chicago fan, 9" x 12" engine and coil, containing about 7,980 ft. of 1" pipe
200 dry kiln trucks, with about 11" double flanged wheels.

Send for our complete monthly stock lists of saw mill and planing mill machinery, also boilers, engines, pumps, machine tools, etc.

WICKES BROTHERS,
Saginaw, Mich.
Seattle Office,
412 Oriental Bldg.

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ABOUT 25M. FEET 1" AND 2" SOFT ELM. Address ROBT. LIGHT, Napanee, Ont.

BUY B. C. TIMBER

358 MILLION FEET OF TIMBER, FIR, CEdar, Spruce aud Hemlock. Easily logged to tide water, Cruisers' Estimate, 20,000 ft per acre. Price $26,000. Apply W.H. LEMSKE, P.O. BOX 972 Vancouver.

TIMBER LANDS

WE HAVE FIVE HUNDRED MILLION standing pine, spruce, cedar, hemlock; large, modern mills building; capital needed; small investors protected; safe mutual plan; don't leave money idle; it can earn fifty per cent. COLUMBIA MUTUAL LUMBER CO., 998 Ellicott Square, Buffalo N.Y.

Lumber Business for Sale

OWING TO THE DEATH OF THOMAS L. Buller of Ridgetown, the Lumber Business, Premises, Mill, etc., are for sale. This is a rare opportunity, everything is in first-class shape. It is a going concern and a very profitable business. Investigation solicited. For particulars apply to L. J. REYCRAFT, Barrister, Ridgetown, Ont.

Current Trade Conditions

ONTARIO.

Conditions have not changed materially in the lumber situation in Ontario during the past fortnight, the amount of stock changing hands being small indeed. In fact it appears that every possible effort is being made by wholesaler and retailer to keep their stocks down to the smallest possible compass. It is safe to say that the amount of hemlock now available for building purposes is not more than one-third of that which the yards contained a year ago. Other woods are in stock in about the same proportion. Moreover, the decreased cut for the coming season is now known to a certain extent at least by actual statistics. For a radius of twenty miles around Gravenhurst the log cut for the coming season will be 31,000,000 feet less than that of last year. One firm, whose cut last season was 14,000,000 feet, will this year cut nothing at all. Other cases are numerous where a decrease of anywhere from 500,000 to 2,000,000 feet are in contemplation. Lack of money rather than fear of the ultimate return of a strong demand is the cause of this shrinkage in the cut.

Hardwoods are in a similar condition. Furniture manufacturers, who are usually busy at this season of the year, are just now far from being pressed with orders and require little lumber. Prices, however, are remarkably stiff for all lines of hardwood, and there seems no possibility of there being even a temporary shading.

Taking into consideration the present small stock in the yards and the decreased cut of the coming winter, lumbermen have every reason to feel hopeful for the revival of trade early in the new year. A general scramble for stock will then take the place of the present indifference that greets the salesman at every turn.

EASTERN CANADA.

The eastern lumber market remains in a very unsatisfactory condition, owing to the continued lack of business in England and in the Eastern States markets. The financial difficulties in New York, it is said, have caused an almost complete suspension of operations in lumber. In consequence, very little material indeed is leaving maritime ports for either American or Ontario markets. A few isolated shipments are going forward to the English markets, but these are simply a clearing up of back orders and are not representative of new business.

The weather has, ever since the beginning of logging operations in September, been very unfavorable and will tend to decrease the small cut that will be gotten out during the coming winter. It is estimated by St. John lumbermen that along the Aroostook, Tobique, St. Francis, and in the district farther north, there will not be more than 60 per cent. of the cutting done this winter that there was last. It is generally feared that a stagnation in manufacturing circles will ensue unless great care is taken to make the production of the immediate future conform to the limited demand.

WESTERN CANADA.

"Things are very quiet in the lumber trade," writes our Vancouver correspondent, and the same condition prevails throughout the West. Practically all the shingle mills have now ceased operations for the balance of the year at least. Most of the lumber mills are still running, but not by any means to their fullest capacity. Many of the logging camps have also closed down for varying periods. Logs are, however, sufficiently plentiful, the prices obtained averaging about $10 per thousand.

While lumber is, in general, meeting with a limited demand from the ordinary consumer, it must, however, be conceded that there is a strong demand not only from the Grand Trunk Pacific but also from the Great Northern and Canadian Pacific for ties and poles for the construction of their new lines. These corporations are using considerable quantities of lumber and diminishing the available stocks, while at the same time but little effort is being put forth to replenish the supplies for next season. In consequence, when the demand of next spring calls for supplies, stocks will be small and prices promise to stiffen.

UNITED STATES.

The market for white pine is characterized in almost all American centres by a very light demand, although prices remain unaffected. It is realized that there is a general curtailment in the cut for the coming season, and that no matter how limited is the demand a surplus of stock is an impossibility. Material concessions in hemlock are reported in the Chicago market, although in New York prices are reported firm. Eastern spruce is weak, orders coming in very slowly and prices being somewhat unsteady. The demand for hardwoods also is very limited. Chicago reports state that hardwoods of all kinds can be bought at very reasonable prices, shading on the list being common.

"No shingle orders" is the report from Washington. Practically all the mills there are closed, while stocks are said to total less than 4,000 cars.

GREAT BRITAIN.

The past few weeks have been very quiet for the London lumber trade, the chief feature having been a further falling away in most of the figures which indicated the consumption a year ago. During October pine deals from New Brunswick totalled 58,000 pieces this year, as compared with 2,000 in 1906; spruce deals, 634,000 pieces as compared with 286,000 in 1906, and birch planks, 183,000 pieces as against 224,000. From the St. Lawrence importations of pine deals totalled 670,000 pieces this year, while for 1906 the total was 754,000 pieces. Spruce deals from the same district totalled this year only 920,000 pieces as compared with 1,592,000 last year.

The Liverpool spruce deal market shows a firmness which it is hoped will increase as the season advances. Canadian pine is scarce and remarkably strong in price, with every indication of presently reaching higher rates.

The timber culled to date of Nov. 5, at Quebec, totals as follows:

	1005 Cubic feet	1906 Cubic feet	1907 Cubic feet
Waney White Pine	1,209,600	673,040	1,116,240
White Pine	136,800	76,720	136,200
Red Pine	1,200	13,400	8,400
Oak	150,960	576,800	399,920
Elm	484,720	602,160	212,360
Ash	10,440	8,880	25,880
Butternut	120		
Birch and Maple	207,640	158,400	82,200

SPRUCE

1x4, 5 & 6 x 10/16 ft. Spruce Flooring
N. B. Cedar Shingles
Spruce Lath
EVERYTHING IN SPRUCE

Campbell-MacLaurin Lumber Co.
LIMITED
Board of Trade Building, Montreal

DRY STOCK READY FOR QUICK SHIPMENT

2 cars 1 x 18 to 23" panel and No. 1 Poplar.
6 " 1" 1st and 2nds Poplar.
6 " 1" No. 1 common Poplar.
6 " 1" No. 2 " "
8 " 1" mill cull Poplar.
2 " 1 x 18 and wider panel and No. 1 Cottonwood.
5 " 5/4 No. 1 common Cottonwood.
15 " 1 x 13 to 17" box boards Cottonwood.
20 cars 1 x 8 to 12" box boards Cottonwood.
19 " 1 x 13 to 17 1st and 2nds "
21 " 1 x 13 to 17 No. 1 common "
20 " 1 x 6 to 12" 1st and 2nds "
15 " 1 x 4" and wider No. 1 common Cottonwood
20 " 1 x 4" and wider No. 2 " " "
15 " 4/4 1st and 2nds plain red or white Oak.
24 " 4/4 No. 1 common plain red or white Oak.

AMERICAN LUMBER AND MANFG. CO., PITTSBURGH, PA.

Cedar Posts Wanted

WANTED—40,000 Cedar Fence Posts, 5 inches and up at Top, and 8 feet long, Peeled. Must be sound quality and straight.

Quote lowest price F. O. B. Cars, Terms Cash, less 2 per cent.

C. A. LARKIN **Toronto, Ont.**

OTTAWA VALLEY LETTER

(Correspondence of THE CANADA LUMBERMAN.)

Ottawa, Nov. 11, 1907. — The lumber manufacturers of the Ottawa valley hope to continue sawing operations a couple of weeks longer than last year. They were about a fortnight later beginning in the spring, which fact has affected business the whole season. The delay in starting hindered the manufacturers from getting lumber fit for the market as early as was the case in most other seasons. Three or four weeks added in the autumn do not count for so much as an early spring start, so that the briskness in the Ottawa valley mills at present will not affect the trade until next year.

Just now affairs are quiet so far as new business is concerned. Nevertheless, indications point to stocks being well broken up about the end of the season. There is now a noticeable dearth of grade lumber and of some sorts of high class pine. For instance, No. 2 good sidings are scarce. The quotations, when they are to be had, are as usual $36 per thousand. The active demand for pine shipping culls has produced a two dollar advance in 10 s. c. and better, 12 to 16 feet.

The quietness reported last month in the lath trade continues, but has not yet produced a weakening in the price. There is considerably more pine lath on hand than at this time a year ago, but spruce is not very plentiful owing to small productions.

A lumberman had difficulty last week getting the best class of shingles. The eighteen inch white cedar shingle is very scarce and dealers report that they could handle four times as much if they could find them. The manufacturers would not be surprised to see these shingles go up to five dollars. The market is greatly strengthened by the big demand in the United States for the best brand of shingles.

The lumber shanties are nearly all filled up with the exception of some of J. R. Booth's camps, and he will continue sending men away during the rest of November. Shanty men have become plentiful and the wages for head log makers and teamsters has dropped a few dollars. The current rates are now from $26 to $32.

An Ottawa lumberman tells the interesting story of a Canadian shipper having purchased timber at $100 a tree. The deal, it is said, was made for 12 white pines in the northern part of New York State. The owner asked $100 a tree, but finally took $1,100 for a dozen. The purchaser cut down the expensive bit of forest and will manufacture the sorts of lumber likely to command the best price on the market. He will ship chiefly to Great Britain. The story has led to a great deal of comment on the change which has taken place in the lumber trade during the last 20 years. Ottawa lumbermen were willing once to take rafts of 3,000 pieces to Quebec for the British market for a smaller profit than would be made from this reported venture in New York State. It would probably take 4,000 white pines to make up the raft, on which would be expended the whole season's work. When expenses and interest on investment were paid the profit in some cases would be no more than one dollar a tree.

The strike at the MacLaren mills at Buckingham on October 8, 1906, is recalled by the progress of the trial in Hull since November 8 of six strikers who participated in that trouble. The charge against them is manslaughter and riot. They have been at large on bail since the strike occurred, and during the trial are allowed to be free on their own recognizances, despite the protest of the Crown prosecutors. Mr. Albert MacLaren, president of the company, after giving his version of the trouble, testified that the value of the MacLaren Company's property at Buckingham was about $800,000. The evidence is nearly all that detailed before, all the others concerned in the affair having been tried and acquitted.

FOR SALE

TIMBER LIMITS:—17 claims, 75% Cedar, east coast Vancouver Island, on water, cruising 25 M. to acre, $3.25 per acre.

TIMBER LIMITS:—50 claims, Alberni, on water cruising 22 M., $2.00 per acre.

LESLIE AND CRAWFORD,
11 Flack Block VANCOUVER, B. C

FOR SALE

200 M 1 x 4 and up Spruce Boards
100 ,, 2 x 4, 2 x 6, 2 x 8 Spruce
500 ,, Pine, 1 in., 1½ in. and 2 in.

APPLY TO

THE J. B. SNOWBALL COMPANY, LIMITED
CHATHAM, NEW BRUNSWICK

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The Cleveland-Sarnia Saw Mills Co., Limited.

Manufacturers and Wholesale Dealers in

TIMBER LUMBER AND LATH

Special Bills Cut to Order in White Pine and Norway, any length from 10' to 60' long.

SARNIA, ONT.

McPHERSON & FULLERTON BROS.
Timber and Real Estate, Victoria, B.C.

FOR SALE.—40 miles of timber on Quatsino Sound Cruiser's report goes twenty thousand feet to the acre or better; mostly Spruce, Hemlock and Cedar. Can be bought for $1.25 per acre, purchaser pay licences.
Write us for particulars as to largest and best timber proposition on Coast. We have timber for sale in all parts of British Columbia.
Victoria Real Estate is a good buy.

R. SPENCE & CO.
Beech File Works.
HAMILTON, ONT.
FILE AND RASP MANUFACTURERS AND RE-CUTTERS

A trial order solicited. Write for price list and terms.
C. P. MOORE, PROPRIETOR.

TELEGRAPH POLES WANTED

We buy all lengths in lots of 500 and up delivered at R. R. siding
Write us for prices and you will see that by cutting your cedar into poles it will net you more than you can get out of it in any other way

J. B. FARWELL & SON
BANCROFT ONT. RENFREW, ONT. OSWEGO, N.Y

Planing and Matching
—IN TRANSIT—
S. POMEROY, Orillia
PLANING, MATCHING, RESAWING, SIDING, FLOORING, MOULDINGS in Car Lots.
Factory near Station. Write for Prices.
'Phone 113

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MANUFACTURERS:
Lumber, Hardwood Flooring, Handles, Poles, Bed Frame Stock, Cheese Box Hoops, Heading, Baskets, Etc. . .
Write, Telegraph or Telephone your orders
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Mills: LATCHFORD, ONT.
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Specialties: GOOD SIDINGS, WHITE PINE, HEMLOCK
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WHOLESALE **LUMBER and TIMBER**
Car and Cargo Lots Only
Specialty: Dimension Timber in DOUGLAS FIR, PINE, HEMLOCK, SPRUCE, YELLOW PINE or OAK.
Correspondence Solicited.

Geo. Gordon & Co.,
Manufacturers of RED and WHITE PINE
Band - Gang Circular
CACHE BAY, Ont.
C. P. R. 26 miles West North Bay
LUMBER AND LATH

Christy, Moir Company
MANUFACTURERS AND WHOLESALERS OF
LUMBER
SPRUCE - SPRUCE
Always in the Market for Mill Cuts Always for Sale
149 Broadway, NEW YORK

SAWS THAT HAVE STOOD THE TEST.

The Yale-Columbia Lumber Company's mill at Cascade have recently been making an enviable record in sawing. During October the daily average was 61,980 feet, eighty per cent. 1 inch lumber and the balance 2 inch, the cutting being done with one double cut band saw supplied them by the A. J. Burton Saw Company, of Vancouver. These saws, which were 11 inches wide when new, are now worn down to 8 inches, and are without a crack and capable of making the above record, which speaks well for the quality of the saws and the manner in which they have been kept up and handled in the mill.

UNIQUE POCKET DIARY.

The first pocket diary for 1908 to reach our desk bears the compliments of Messrs. Thos. & Wm. Smith, Limited, the well known wire rope manufacturers of Newcastle-on-Tyne, England. The diary has been compiled in a most convenient form and provided with leather cover, patent clasp and pencil. Most of the book is given up to memorandum space, but a few pages are devoted to tables relating to their steel wire ropes, in which are given the circumference, diameter, weight per fathom, breaking stress and minimum diameter of barrel. Smith's "Red Thread" brand of wire rope is already favorably known to many Canadian lumbermen, and their business in this country is growing very rapidly. Any of our readers will be supplied with the diary by addressing Mr. D. W. Clark, Box 521, Toronto, who is the Canadian representative for Thos. & Wm. Smith.

TREE PLANTING AT TORONTO UNIVERSITY.

With the object of improving the appearance of the University grounds and at the same time providing specimens of both native and foreign trees for study, a tree planting campaign has been begun at Toronto University under Professor Fernow, dean of the new faculty. Some thirty specimens have been planted in the ravine behind McMaster University, and seventy more will shortly be added. Mr. Graham Campbell, Superintendent of Buildings, and Dean Fernow, of the Faculty of Forestry, will also co-operate in improving the appearance of the landscape about the University property.

A company to be known as the North Star Lumber Company, with a capital stock of $500,000, with head office at Brandon, Man., has recently been incorporated.

AMOS J. COLSTON
Hochelaga Bank Building.
QUEBEC
Pine and Spruce Lumber, Dressed, Matched or Rough. Pulpwood, Railway Ties, Box Shooks, Hardwood Flooring, bought and sold. Accountant, Auditor, Liquidator, General and Real Estate Agent.
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P. PAYETTE & CO.
Manufacturers of Saw Mill and Engine Machinery, and all kinds of Marine Machinery.
PENETANGUISHENE, ONT.

B. C. TIMBER
We have over 150,000 acres of finest timber.
If you are interested on a big scale it will pay you to write.
Wolverton & Co.
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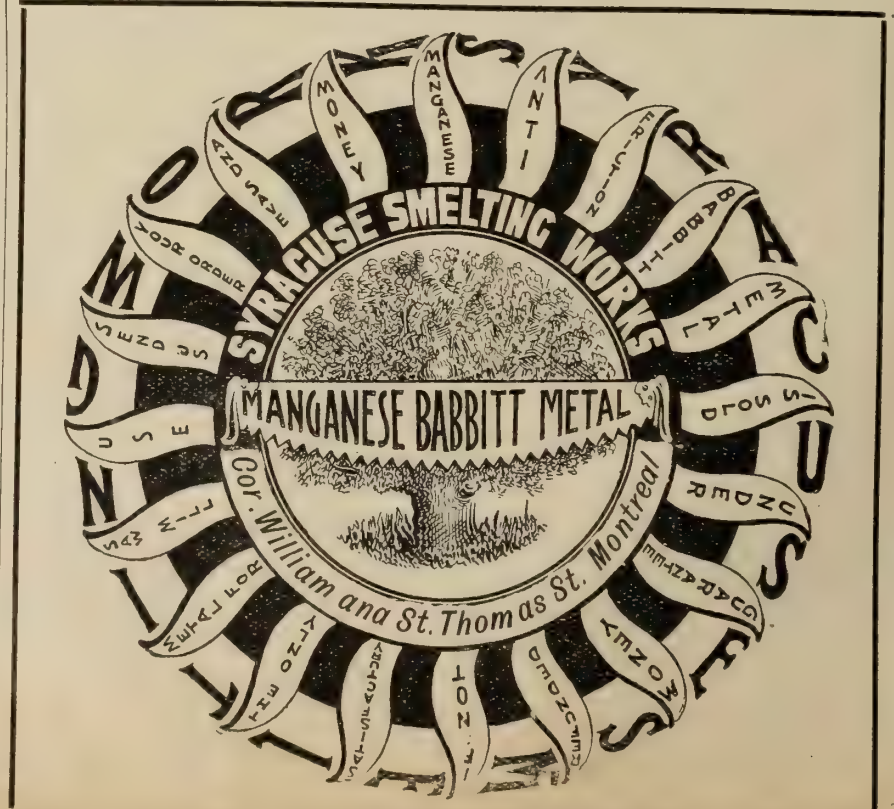
Sole Canadian Agents - Prices Reduced
WATEROUS, BRANTFORD, CANADA

∴ WE WANT TO BUY ∴
1½", 2" and 3" Rock Elm, 1sts and 2nds.
1", 1¼", 1½" and 2" Chestnut, "
1", 1¼", 1½" and 2" Butternut, "
THE McLENNAN LUMBER CO., LIMITED, MONTREAL, QUE

H. Walters & Sons
HULL, - CANADA
Manufacturers of
All kinds
AXES, AXE HANDLES, LUMBERING AND LOGGING TOOLS
Machine Knives and Edge Tools
LONG DISTANCE PHONE
We supply the largest Lumbermen in Canada. Nous fournissons les plus grands marchands de bois du Canada,
NAMELY:
J. R. Booth, Ottawa, Ont.; W. C. Edwards & Co. Rockland, Ont.; McLachlin Bros., Arnprior; E.B. Eddy Co., Limited, Hull; A. & B. Gordon & Co. Pembroke; G. Perley & Co, Calumet, Que.; Hawkesbury Lumber Co., Hawkesbury, Ont.; A. Fraser Co., Limited, Ottawa, Ont.; Shepherd & Morse Lumber Co., Ottawa Ont.; Hull Lumber Co., Ottawa, Ont.; Gilmour & Hughson, Hull, P.Q.



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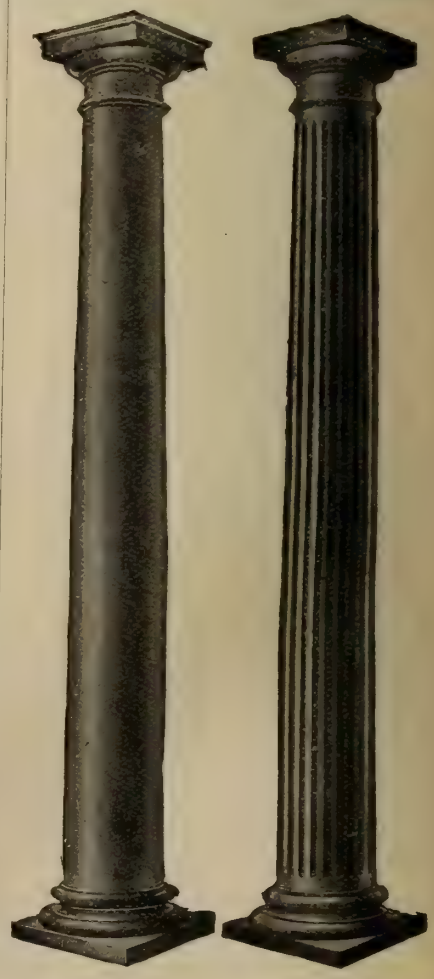
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We have the most perfect fitting LOCK-JOINT COLUMN made.
Write for Catalogue and prices.
WE FURNISH COLUMN IN ANY SIZE OR LENGTH

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New Brunswick Cedar Shingles, Ontario Cedar Shingles, Douglas Fir, Lath, Fence Posts, Yellow Pine, All Hard and Soft Woods

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OFFICES:

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CURRENT LUMBER PRICES WHOLESALE

TORONTO, ONT.

CAR OR CARGO LOTS.

1 inch No. 1 Pine cuts & better	$49 00	51 00
1¼ inch No. 1 cuts and better	54 00	56 00
1" No. 1 Cuts and Better	56 00	58 00
1¼ in. No. 2 Pine cuts and better	46 00	47 00
1" No. 2 Pine Cuts and Better	48 00	50 00
1¼ inch No. 3 Cuts and better	42 00	44 00
1" No. 3 Cuts and Better	44 00	46 00
1 in. Pine Dressing and better shorts	28 00	30 00
1x4, 6and8common	27 00	28 00
1 x 10 common	30 00	32 00
1 x 12 common	34 00	36 00
2 x 10 common	28 00	30 00
2and3x12common	34 00	36 00
1 x 10 inch box and common	27 00	29 00
1" mill run sidings	28 00	29 00
1x10and12millculls	22 00	23 00
1 inch mill cull Sidings	21 00	22 00
1" dead cullsidings	15 00	16 00
1¼ inch Flooring	32 00	34 00

HARDWOODS—PER M. FEET CAR LOTS.

Ash White, 1sts and 2nds, 1 to 2 in	$36 00	38 00
Ash, Black, 1sts and 2nds, 1 to 2 in	33 00	35 00
Ash, Black, mill run	26 00	27 00
Birch, common and better, 1 in	24 00	25 00
Birch, common and better, 1¼ to 3 in	26 00	27 00
Birch, mill run	21 00	22 00
Basswood, common and better, 1 in.	25 00	26 00
Basswood, common and bet., 1½ to 2 in	26 00	28 00
Basswood, mill run	22 00	23 00
Soft Elm, common and better, 1 in.	25 00	26 00
Soft Elm, common and bet. 1¼ to 2 in	27 00	28 00
Soft Elm, mill run	22 00	23 00
Rock Elm, common and better, 1 in.	26 00	28 00
Rock Elm, common and bet. 1¼ to 2 in	28 00	30 00
Rock Elm, mill run	22 00	23 00
Soft Maple common and better, 1 in	21 00	22 00
Maple common and better, 1¼ to 3 in	24 00	26 00
Maple, mill run	20 00	21 00
Oak, red, plain, 1sts and 2nds	48 00	50 00
Oak, white, plain, 1sts and 2nds	44 0	50 00
Oak, quartered, 1sts and 2nds	75 00	80 00
Hickory, 1sts and 2nds	38 00	40 00

Spruce mill run	24 00	25 00
Spruce mill culls	17 00	18 00
Hemlock, 1x4 to 8 in	19 00	20 00
2x4 to 8 in., 10 to 16 ft.	22 00	23 00
2x4 to 10 inch, 18 ft.	23 00	24 00
Clear inch B.C. cedar, kiln dried		54 00
Clear inch B.C. cedar air dried boat lumber		57 00
Douglas fir dimension timber, up to 32 feet		37 80
Fir flooring, edge grain		44 00
1 in. No. 1 4 ft. Pine Lath		4 75
1½ in. No. 2 4 ft. Lath		4 25
1¼" No. 1 32" pine lath	2 25	2 50
1¼" No. 1 4 ft. hemlock lath		4 00
XXXX Pine Shingles		3 90
XX Pine Shingles	2 60	2 75
X Pine Shingles		90
XX Cedar Shingles		3 00
B. C. Shingles		
XXX 6 butts to 2 in.		3 85
XXXX 6 to 23-16 in.		4 07
XXXXX 5 to 2 in.		4 50
XX No. 2, 6 to 2 in. / XX " 6 to 23-16 in.		3 00
Red pine, clear and clear face	35 00	37 00
Red pine, common	25 00	27 00

OTTAWA, ONT.

MANUFACTURERS' PRICES.

Pine, good sidings: 1in x 7in. and up	$40 00	44 00
1¼ in. and 1½ in. x 8 in. and up	50 00	56 00
1in. x 7 in. and up	52 00	56 00
No. 2 cuts 2x8" & up	34 00	36 00
Pine good strips 1 in.	35 00	38 00
1¼ in. and 1½ in.	36 00	40 00
2 in.	40 00	45 00
Pine good shorts: 1" x 7" and up	37 00	40 00
1 in.	28 00	30 00
1¼ in. and 1½ in.	40 00	43 00
2 in.	42 00	45 00
½" to "9 A Sidings		17 00
Pine, No. 1 dressing siding	26 00	29 00
Pine, No. 1 dressing strips	26 00	31 00
Pine No. 1 dressing shorts	20 00	25 00
Pine, 10 s. c and better 12' to 16'	27 00	30 00
Pine, 8 s. c. and better 12' to 16'	23 00	26 00
Pine, 7 up s. c. sidings	25 00	28 00
Pine s. c. strips	23 00	26 00
Pine, s.c. shorts	17 00	19 00
Pine, box boards	20 00	23 00

1 x 10 No. 1 barn	29 00	31 00
1 x 10 No. 2 "	23 00	25 00
1 x 8 & 9 No. 1 barn	23 00	26 00
1 x 8 & 9 No 2 "	20 00	22 00
Pine Shorts 6' to 11' x 10"	20 00	21 00
Pine mill culls	18 00	20 00
Pine O. culls	12 00	14 00
Spruce, 1"x4" & up	18 00	20 00
Spruce, 1" stocks, 7, 8, 9 and 10"	19 00	21 00
Spruce, 1" clear (fine dressing and B	24 00	26 00
Hemlock	14 00	16 00
Basswood	18 00	22 00
Birch	18 00	20 00
Lath, per M		
No. 1 white pine 1½"	4 00	4 50
No. 2 white pine	3 50	3 75
Spruce, mill run	3 25	3 50
Red Pine mill run	3 00	3 50
Pine Shingles		
XXXX, 18 inch	3 25	3 75
Clear Butt, 18 inch	2 75	3 25
XX 18 inch	1 70	1 00
White Cedar Shingles		
XXXX, 18 inch	4 00	4 50
Clear Butt, 18 inch	3 25	3 75
XX, 18 inch	1 85	2 00

QUEBEC, QUE.

WHITE PINE—IN THE RAFT

	cts.	
Square white pine, measured off, 30 to 40 feet average	35	45
First class Ottawa waney, 18 inch average, according to lineal	62	65
" " 19 to 20 inch average " "	65	70

RED PINE—IN THE RAFT.

Measured off, according to average and quality	30	40
Shipping order " " "	35	40

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	60	65

ELM.

By the dram, according to average and quality 40 to 45 feet	70	74
" " " " 30 to 35 feet	55	60

ASH.

19 inches and up, according to average and quality	25	30
Average 16 inch	35	43

BIRCH.

14 Inch	16	18
16 "	26	28
17 " "	30	32
18 " "		

SARNIA, ONT.

UPPERS.

1 in., 8" and up wide	$78 00	
1¼, 1½ and 2" "	78 00	
2½ and 3" "	86 00	
4" "	91 00	

SELECTS.

1 in., 8" and up wide	69 00	
1¼, 1½ and 2" "	68 00	
2½ and 3" "	81 00	
4" "	86 00	

FINE, COM. AND BETTER.

1 x 6 and 8"	45 00	
1 in., 8" and up wide	55 00	
1¼ and 1¾" "	57 00	
2" "	58 00	

FINE COMMON.

2½, 3 and 4"	76 00	81 00

NO. 1 CUTS.

1 in., 8" and up wide	41 00	
1¼ in. "	50 00	
1½ in. "	50 00	
2" "	54 00	
2½ and 3" "	70 00	
4" "	75 00	

NO. 2 CUTS.

1 in., 6" and up wide	24 00	
1¼ "	39 00	
1½"	39 00	
2" "	42 00	
2½, 3 and 4" "	57 00	59 00

NO. 3 CUTS.

1 in., 6" and up wide	21 00	
1¼ and 1½" "	30 00	
2" "	30 00	
2½, 3 and 4" "	40 00	45 00

MILL RUN

1" x 4"	25 00
1" x 5"	27 00
1" x 6 and 8"	27 00
1" x 10"	29 00
1" x 12"	31 00
1" x 13 and up	31 00
1¼ x 4 and 5"	$28 00

NO. 1 BARN.

1 in.	$28 00 to $37 00
1¼, 1½ and 2"	33 00
2½ and 3"	35 00
4"	40 00

NO. 2 BARN.

1 in.	27 00 to 31 00
1¼, 1½, and 2"	28 00
2½ and 3"	30 00

NO. 3 BARN.

1 in.	25 00 to 28 00
1¼, 1½ and 2"	25 00 to 28 00

BOX.

No. 1, 1", 1¼, 1½, 2	22 00 to 24 00
No. 1 mill culls, 1, 1¼, 1½ 2"	18 00 to 20 00

MILL CULLS.

Mill Run Culls 1"	17 00
1", 1¼, 1½ and 2"	18 00
No. 2, " " "	16 00

LATH.

No. 1, 32"	1 75
No. 2, 48"	4 00
No. 1, 48" pine	4 50

WINNIPEG, MAN.

NO. 1 PINE, SPRUCE AND TAMARAC

DIMENSIONS, ROUGH OR S. 1 S. AND 1 E.

	6 ft	8 ft	10 ft	14 x 16 ft
2 x 4	19 00	22 00	24 00	24 00
2 x 6 and 2 x 8	22 50	22 50	24 00	24 00
2 x 10	22 50	23 00	26 00	24 50
2 x 12	23 00	24 00	27 00	26 50

PINE, SPRUCE, TAMARAC AND LARCH

MOUNTAIN STOCK

Dimensions

2 x 4-12	$25 00
2 x 4-8-14-16	25 00
2 x 4-10-18-20	27 00
2 x 6 / 2 x 8 } 8 to 16	25 00

Common Boards

4 inch	$21 00
6 "	23 00
8 "	25 00
10 "	25 00
12 "	25 00

Flooring

4 or 6 inch No. 1	$35 00
" " " 2	33 00
" " " 3	26 00

Shiplap—Finished

4 inch	21 00
6 "	24 00
8, 10, 12 inch	25 00

Siding

6 inch No. 1	35 00
" No. 2	33 00
" No. 3	26 00

Lath

No. 1 Cedar, Pine, Spruce	5 00
No. 2 " " "	3 25

PINE—ROUGH TIMBER

	12 ft.	14 and 16 ft
3 x 6 and 3 x 8	25 00	25 00
3 x 10	26 50	25 50
3 x 12	27 50	27 00
4 x 4 to 6 x 8	25 00	25 00
4 x 10 to 10 x 10	27 00	26 00
8 x 8	25 00	25 00
6 x 14 up to 32 ft		30 80

BRITISH COLUMBIA FIR

DIMENSIONS. S. 1 S. AND E.

2 x 4, 2 x 6, 2 x 8, 8 to 16 ft	$25 00
" " " 18 to 32 ft	27 00
2 x 10, 2 x 12, 8 to 16 ft	25 50
18, 20, 22 ft	27 50
24, 26, 28, 30, 32	29 50
2 x 14 up to 32 ft	29 00
3 x 4 to 4 by 12, 8 to 16 ft	27 00
3 x 4 to 4 x 12, 18 to 32 ft	29 00
6 x 6 to 6 x 12 up to 32 ft	29 00
3 x 14, 4 x 14	29 00

B. C. FIR TIMBER—ROUGH.

8 x 8, 10 x 10, 10 x 12, 10 x 14, 12 x 12, 12 x 14, 14 x 14, 14 x 16, up to 32	$30 80
10 x 20	32 80
8 x 20	34 30

All Common Cedar $2.00 per M. less than Fir.

FLOORING.

No 2 Red Pine, 4 in	30 50
B. C. Fir	40 00

SHIPLAP.

Pine or Spruce	24 50
8 to 16 ft., 6 in	23 50
B. C Fir 16 ft., 12 in	22 90
B. C. Fir 16 ft., 6 in	21 90

BOARDS—ROUGH OR S. 1 S.

No. 1 Common Pine, 10 inch	$28 50
" 2 " " "	25 00
" 3 " " "	23 00
" 4 " mixed widths	21 50
" 5 " "	18 50

SHINGLES.

XXX B. C. aCedar	$3.45
X X B. C. Cedar	2.45
X X X Dimension	.65

LATH.

No. 1 White Pine	$5.00
No. 1 B. C. Fir	4.50

HARDWOODS CAR LOTS, F. O. B. WINNIPEG

White Ash, C/2nd's, 1" to 2"	$64.00 to	$67.00
Birch, " 1" to 2"	49.00 to	55.00
Basswood " 1" to 1½"	45.00 to	50.00
Rock Elm " 1" to 2"	48.00 to	50.00
Hard Maple " 1" to 4"	47.00 to	55.90
Plain Red and White Oak C/2nds, 1" to 2"	65.00 to	63.00
Quartered Red " " 1" to 2"	74.00 to	79.00
" White " " 1" to 2"	85.00 to	90.00

BUFFALO AND TONAWANDA, N.Y.

WHITE PINE.

(Wholesale selling price.)

Uppers, 1, 1¼, 1½ and 2 in	$82 00
2½ and 3 in	90 00
4 in	95 00
Selects 1 in	73 00
1¼ to 2 in	72 00
2½ and 3 in	85 00
4 in	90 00
Fine common, 1 in.	57 00
1½ and 1¾ in	59 00
2 in	61 00
3 in.	80 00
4 in	85 00
Cut'g up, No. 1, 1 in.	45 00
1¼ and 1½ in	54 00
2" No 1 Cuts	58 00
No. 2, 1 in	28 00
No. 2, 1¼, & 1½ in	43 00
No. 3, 1¼, and 1½	32 00
No. 3 1½" & 2"	35 00
Dressing 1¼ in	42 00
1¼x10 and 12	45 00
1½ in	40 00
2 in	42 00
Shelving, No. 1, 13 in. and up, 1 in	45 00
No. 1 Mold st'ps 1 to 2 in	5 00
No. 2 Moulding Strips, 1 to 2 in	42 00
Barn, No. 1, 12 in	37 00
6, 8 and 10 in	32 00
No. 2, 10 in	32 00
No. 2, 12 in	33 00
No. 3, 10 in	27 00
No. 3, 12 in	28 00
Box, 1x4	21 00
1x6 & up	24 00
1x10	24 00
1x12	25 00
1x13 and up	26 00
1¼ and 1½ & 2 in	25 00
Mill Culls, 1	20 00
1¼, 1½ and 2 in	20

BOSTON, MASS.

White Pine Uppers, 1 to 2 inch	$93 00 to	$90 00
Selects, 1 to 2 inch	78 00	85 00
Fine Common, 1 inch	58 00	60 00
1¼ to 2 inch	64 00	66 00
No. 1 Cuts, 1 inch	48 00	50 00
1¼ to 2 inch	58 00	60 00
No. 2 Cuts, 1 inch	35 00	37 00
1¼ to 2 inch	48 00	52 00
Barn Boards, No. 1	37 00	47 00
No. 2	35 00	40 00
No. 3	32 00	34 00
Spruce, 10 and 12 in. dimension		24 00
9 in. and under		22 00
10 and 12 in. random lengths, 10 ft. and up		23 50
2x3, 2x4, 2x5, 2x6, 2x7 and 3x4 random lengths, 10 ft. and up		18 00
All other random lengths, 9 in. and under, 10 ft. and up		21 00
5 in. and up merchantable boards, 8 ft. & up, p. 1 s		20 00
Out Spruce boards, p. 1 s		17 00
1x2 and 1x3 furring p. 1 s clipped and bundled	21 00	22 00
½" spruce laths		3 75
1½" " "		3 50

NEW BRUNSWICK CEDAR SHINGLES.

Extras		4 00
Clears		3 50
Second clears		2 35
Clear Whites		1 35
Extra 18 (Clear whites out)	2 25 / 1 35	1 60
Extra 18 (Clear whites in)		

BRITISH CLUMBIA SHINGLES.

Red Cedar Extras, 16 in. 5 butts to 2 in.	4 50
" Eurekas, 18 in. " "	4 70
" Perfections, 5 butts to 2¼ in.	6 00

THE NEWS

Another saw mill is to be erected at Kamloops, B.C. It is understood that considerable capital is behind the scheme.

It is said that all the shingle mills in Vancouver, excepting five, have closed and will remain so till about the middle of January.

Fleck Brothers, Limited, have been incorporated as a lumber firm with head office at Ottawa, with a capital stock of $49,500.

By the falling of a brick stack at the Newville Lumber Company's mill at Newville, N.S., two employes were injured, one fatally.

The G. Dufault Milling Company, Limited, have been incorporated with a capital stock of $20,000, the head office being at St. Helene, Que.

The tannery of Mr. Edmond Julien, at Limoilou, Que., was totally destroyed by fire on November 4th, loss being $25,000, insurance $6,500.

Fire causing a loss of $3,000 destroyed Reardon's shingle mill, situated at the junction of the Scott and Yale roads, close to New Westminster.

Fire destroyed the main building of Kreutziger's planing mill at Waterloo, Ont., a short time ago. The office, outbuildings and lumber yards escaped destruction.

Mr. J. J. McFadden, a lumber dealer of Sault Ste. Marie, is spoken of as a probable candidate to contest East Algoma for the Liberals at the coming election.

The operations at Bathurst, N.B., by the Haines Lumber Company, will necessitate the employment of about 200 men to take out their cut during the coming winter.

Charles Taite, of New Westminster, B.C., who has been engaged in the lumber business for a long time in that city and Winnipeg, has erected a shingle mill in Surrey.

Graves, Bigwood & Company are preparing to get out a cut of 40,000,000 on their white pine limits. The mill at Byng Inlet is getting out 9,000,000 feet a month, with a fine run also at Midland.

A syndicate of Northwest capitalists will next season operate a large saw mill at Bella Coola. The men behind the proposition have options on about 60 square miles of timberlands along the coast.

P. Wheeldon's mill at Vancouver has commenced operations. A Dunbar shingle machine has been installed, with capacity of 30,000 shingle a day. A 25 horse-power electric motor furnishes the power.

All of the Ballard timber mills, seventeen in number, situated in Washington, have ceased operations, as it is claimed that the cost of manufacture does not permit the profitable manufacturing of shingles at present prices.

At Forest on November 3rd the stave and heading mill owned by J. Greenless and F. Kennedy, Forest, and the Sutherland and Innes Company, Chatham, was destroyed by fire, with a loss of $6,000, covered by $3,000 insurance.

A public meeting was held in the village of Adelaide, Ont., on November 1, to discuss the advisability of building a new saw mill on the site of the one destroyed by fire last spring. A loan of $800 will be asked of the township.

Two men were killed near Chemainus on November 4th, when the logging train operated by the Chemainus Lumber Company ran away down a steep mountain grade. The brakes, it is said, refused to work, allowing the train to get beyond control.

The large planing mills, sash and door factory, etc., including a stock of lumber, laths and supplies of the Sudbury Builders' Supply Company, were destroyed by fire on November 6th. The loss was about $50,000, with but little insurance.

After a shut-down of nearly two months, the Fairview Cedar Lumber Company, of Vancouver, B.C., have commenced cutting again, and expect to run steadily all winter. During the shut-down the necessary repairs to the machinery were made.

A 700 light electric plant, consisting of a 35 kw. direct current generator, with panel switchboard equipment, etc., has been purchased from the Canadian General Electric Company by the Bowman Lumber Company, Limited, for their mill at Comaplix, B.C.

It is stated that a party of New York capitalists are contemplating the purchase of some 500 miles of timber land at Hawkes Bay, Newfoundland. Their intention is to erect large paper mills, of which they already have a number in Illinois and Wisconsin.

According to a provision in a will of Wm. Prowse, who recently died in Toronto, leaving property worth $24,398, his son Frederick E. C. Prowse, is to have the privilege of renting the present lumber yard at the rear of numbers 241-243 Robert street as long as he may require it for business purposes at a nominal rental of $1 a year.

The Kiltz Logging Company, of Vancouver, are now getting out logs from their limits on Thurlow Island. This company purchased the logging camps and equipment of Mr. D. C. Esson at Knox Bay, Thurlow Island. Their output consists of fir, cedar, spruce and hemlock, which is marketed in Vancouver. Mr. W. C. Kiltz is head of this concern.

The Schaake Machine Works, Limited, of New Westminster, recently supplied a 72 inch by 18 foot horizontal return tubular boiler, made by the Canada Foundry Company, to the Brunette Saw Mills, Limited, Sapperton, B.C. They are also supplying two boilers of similar size and make to the North Arm Lumber Company, Limited, Eburne, B.C.

The Lamb-Watson Lumber Company, Limited, of Arrowhead, B.C., are increasing their electric lighting equipment. They have obtained a 25 kw. direct current generator with panel switchboard from the Canadian General Electric Company. This gives them capacity for 500 more lights, in addition to the capacity of the 50 kw. generator they installed some time ago.

The Rat Portage Lumber Company, Limited, are installing a 750 gallon "Standard Underwriters" fire pump, at their mill at Harrison River, B.C. The pump is of the Canada Foundry Company's make. The company are also installing in this mill a Canadian General Electric Company's 30 kw. direct current generator, with complete panel switchboard equipment, giving capacity for 600 lights.

A request that the unsecured creditors of the Imperial Paper Mills Company be protected by the Government, in the event of any disposition of the assets, has been made before Hon. Frank Cochrane, Minister of Lands, Forests and Mines. The Crown owns the timber lands from which the paper mill derived its raw material, and it was thought that if these should be transferred the interests of the creditors ought to be guarded by the Government.

An action for $2,250,000 has been entered by Henry L. Sprague, attorney, of New York, and other New York capitalists, against Mr. J. R. Booth, of Ottawa. The action arises from the sale of the Canada Atlantic Railway in January, 1902, when an agreement was made between Arthur L. Meyer, of New York, on behalf of a New York syndicate, and Mr. Booth, by which the former agreed to purchase the Canada Atlantic for $10,000,000. The purchaser agreed to pay $250,000 down to bind the bargain, this amount to be deposited in the Bank of Montreal. The balance was to be paid by June 1 of that year, but on that date Mr. Booth claims that, although he had the stock, etc., at the bank, the purchase money was not forthcoming. Mr. Meyer, it is said, having become insolvent some time before and having turned over the agreement to Dr. Webb, H. L. Sprague and others of New York on their agreeing to carry out the scheme. On June 22, 1902, Mr. Booth wrote Mr. Meyer, stating that he would accept a deposit of $250,000 to bind the bargain, the letter concluding as follows: "In the event of any default being made in the payment of the purchase under the terms of the agreement of June 1st the said sum of $250,000 be forfeited and remain my absolute property." The action has now begun to recover this $250,000 and an additional $2,000,000 damages and the costs of the action.

P. O. Box 994 - Phone 980

T. M. McKAY

Timber Broker

536 Hastings Street
over Union Bank

VANCOUVER, B. C.

SPECIAL MACHINERY SALE

Large Centrifugal Pump and Pulsometer, in first-class condition, complete with foot-valve and hose; no reasonable offer refused.

Screw Cutting Lathe, 10 ft. bed 16" swing, very little used; in fine condition, a chance to secure good modern Lathe at a bargain.

Also large Drill and Slotter, 24" Swing, in first-class condition.

Self-oiling Peerless Engine, 75 h.p., also smaller sizes of different makes, Boilers, all sizes, tested and guaranteed.

Our stock is changing continually; the up-to-date Second Hand Machinery House of Montreal.

W. L. Miller & Co.
13-16-18 St. Peter St., MONTREAL

RESAWING MACHINE

As can be seen by the engraving, the frame is cast in one piece. The legs of cast iron are cast in one piece with the saw bench. This makes an extremely substantial machine.

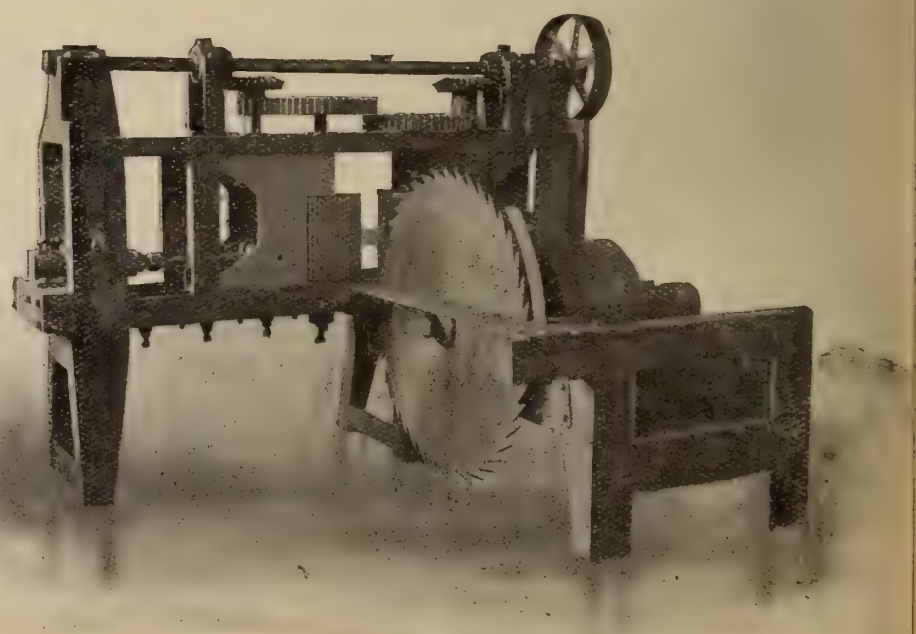
The feed rolls 12" diameter are driven by cut gears 16" in diameter. The proportions of th gears are such as to give a powerful driving mechanism.

The arrangement to set the stationary roll (not shown in the cut) is very accurate, quick and reliable. The clear distance between the slides is 19."

The steam press is of improved construction and has a travel of 10"

The saw is 42" and saw arbor bearing is set in slide so that saw can be brought closer to the rolls, as it wears.

The weight of the machine is 3,000 lbs.



THE SAVOIE-CUAY COMPANY - Makers of Saw Mill Machinery PLESSISVILLE STATION, P. Q.

Amatite

THE MINERAL SURFACED ROOFING

Ordinary ready roofing is made with a smooth surface, prepared to receive a coat of paint. Sometimes the paint is applied at the factory and when the roof is laid no coating is required, but after a year or two the paint, under the hard conditions of roof service, wears out and it is necessary to coat the roofing again. Every year or two after that the same thing is necessary, and the expense of these annual paintings will in the end be more than the original cost of the roofing.

Amatite, however, is a different kind of roofing. In place of the smooth surface it has, on the weather side, a firmly embedded layer of crushed mineral matter. This mineral matter will wear longer than a dozen coats of paint. It needs no coating, and when your Amatite roof is once laid the work is all done and the expense is ended.

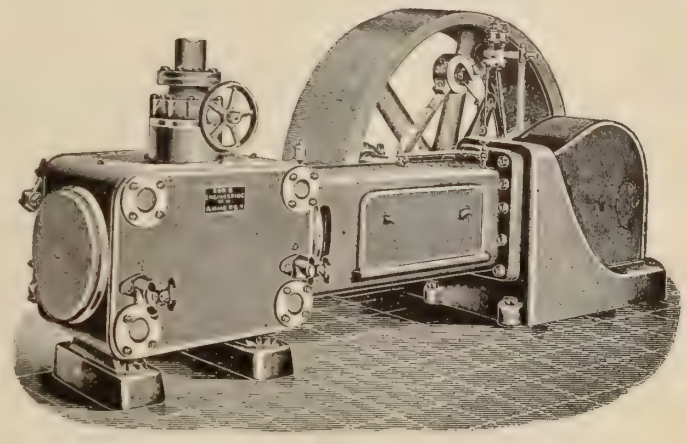
The durability of Amatite is assured by its thickness and weight. It contains more material per square foot than other roofings costing several times as much.

Booklet and sample will be gladly sent to you without charge if you will forward your request to the nearest office.

THE
PATERSON MANUFACTURING CO., LTD.
CANADIAN AGENTS.

Toronto Montreal Winnipeg
St. John, N.B. Halifax, N.S.

Robb Power Plants



We design and contract for steam power plants and maintain an experienced and thoroughly practical engineering staff that is at the service of our customers.

CORLISS ENGINES
HIGH SPEED VERTICAL ENGINES
MEDIUM SPEED HORIZONTAL ENGINES
ROBB-MUMFORD BOILERS
RETURN TUBULAR BOILERS
WATER TUBE BOILERS

ROBB ENGINEERING CO., Ltd.
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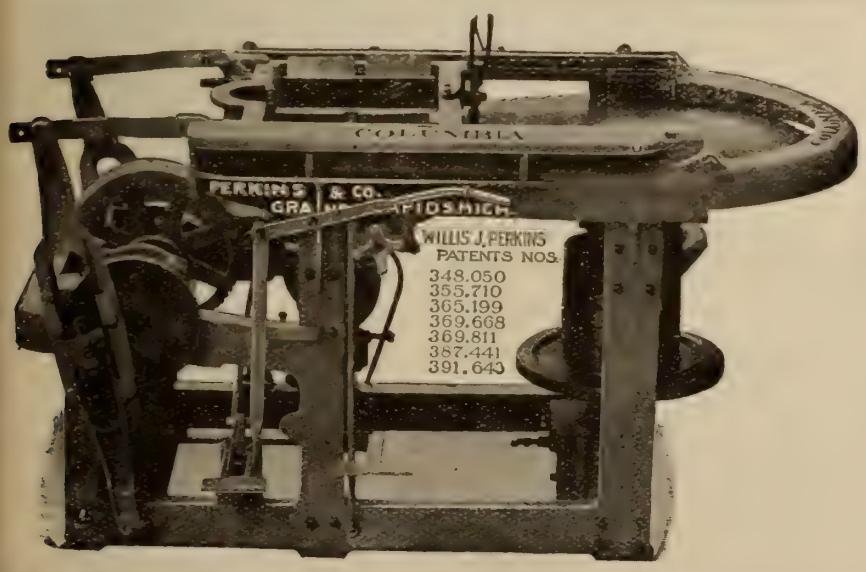


You Can't Convince

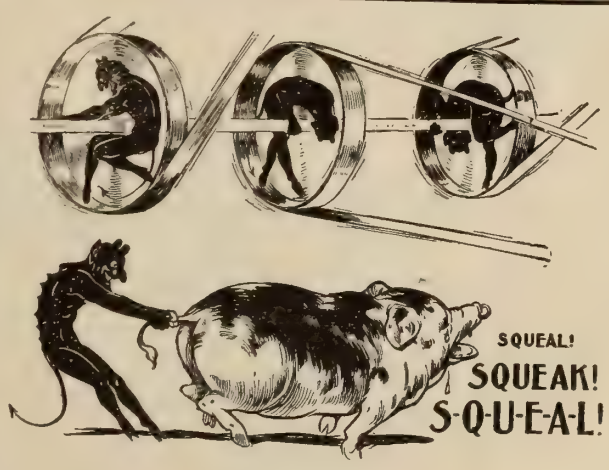
Users of Perkins Shingle Machines that there are others "just as good." They know better. They've learned from experience that for every unit of horse power consumed, Perkins Machines will produce more and better shingles from the same stock, than all similar machines. We've done everything in our power the past 30 years to make

Perkins Shingle Machines

The BEST—and we've succeeded. No matter whether you buy a PERKINS Hand Feed, Single, Double or Ten-Block Shingle machine, it will be absolutely the best machine in its class. Illustration shows our famous COLUMBIA SINGLE BLOCKER, the highest development of its type. Write for catalog of our line.

Perkins & Co. GRAND RAPIDS, MICH

SHINGLE HEADING AND BOX BOARD MACHINERY



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The Twin Screws are arranged with flexible joint to raise up in crossing portage

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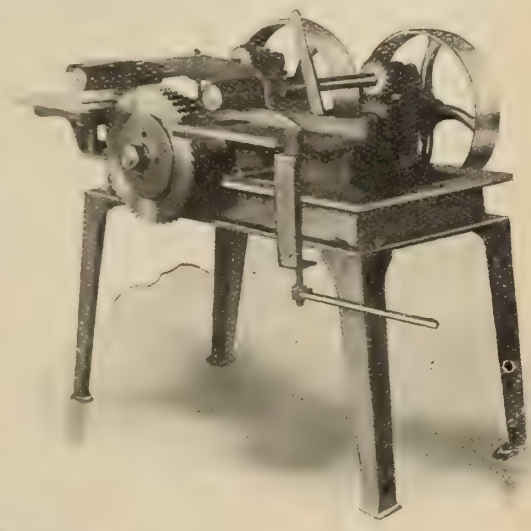
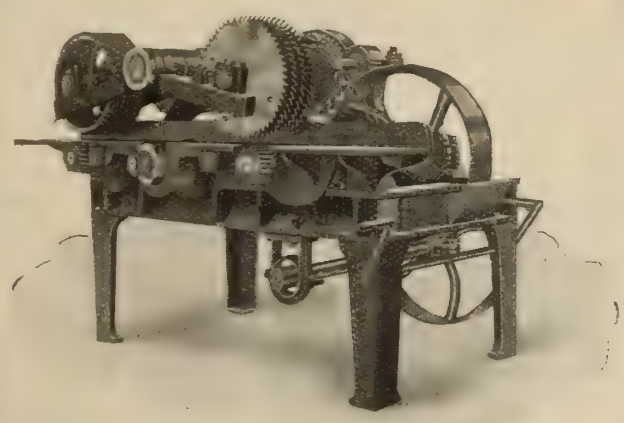
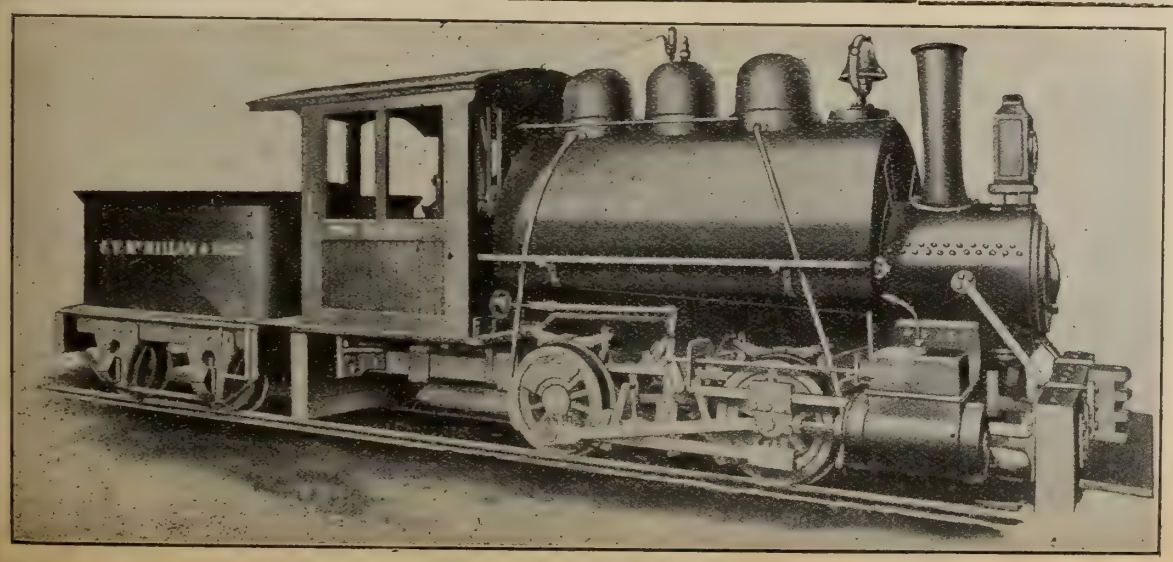


The accompanying cuts represent our machines, which have cut on a trial test 84,100 laths in ten hours.



Booklet and all information cheerfully supplied upon request.



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The Ideal

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MANY TYPES ANY GAUGE
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The **DAVENPORT** is designed for service under all practical conditions, and will do the work of a geared engine on any grade up to 6 per cent.

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Only the Best Material Used

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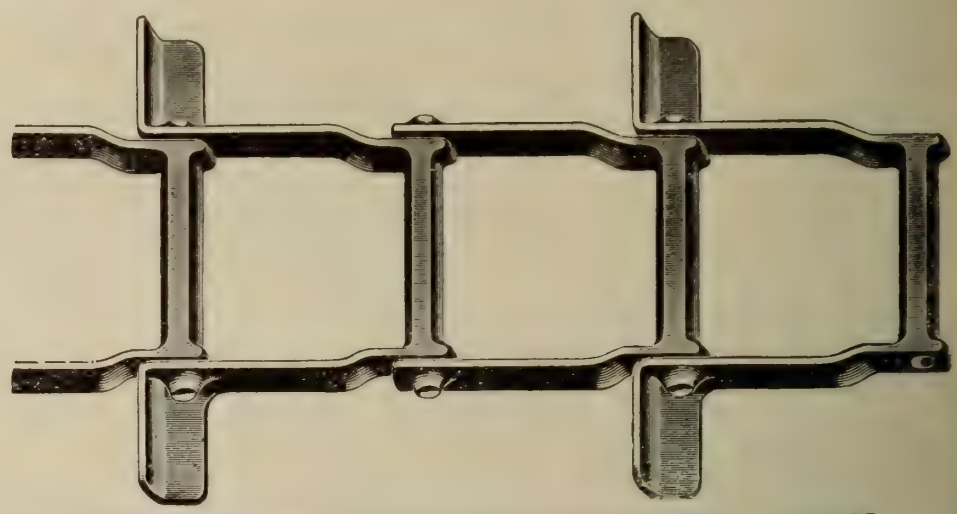
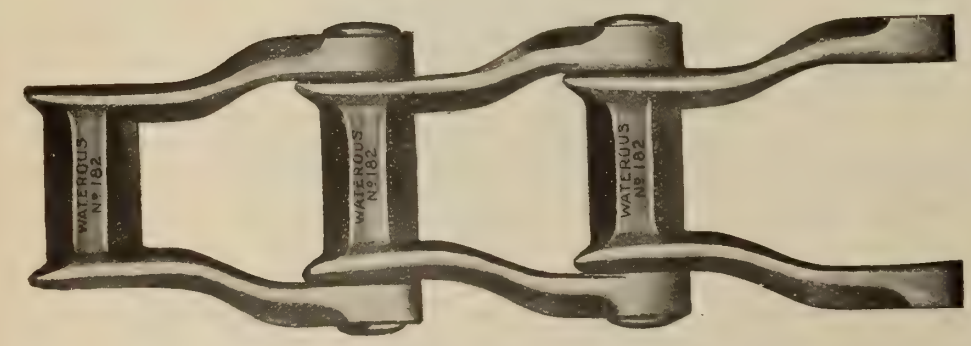
Made in three sizes.



MALLEABLE RIVETED SAWDUST CHAIN

These Chains may be used all Plain Links, all attachments or any portion of Plain and Attachment Links mixed.



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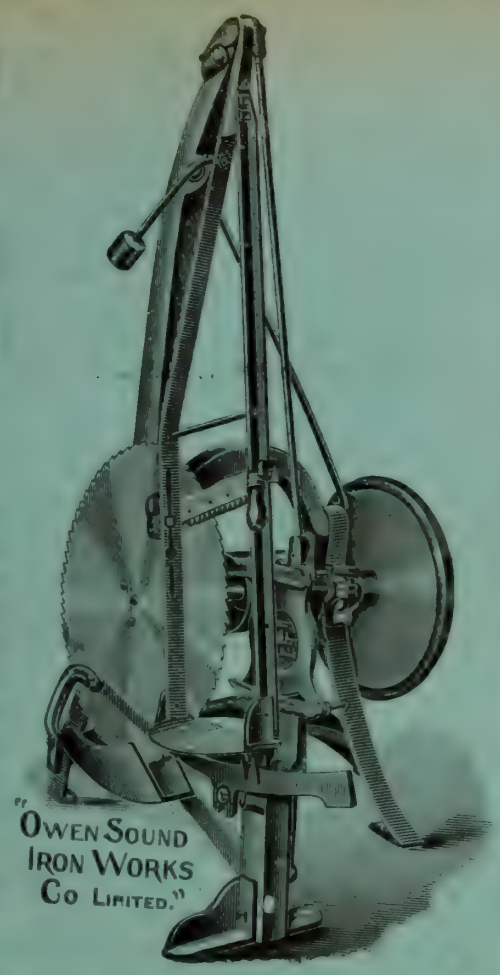

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1907 MODEL CAN BE USED WITH OR WITHOUT RUTTER

Throws Snow 9' Each Side of Sleigh Track.

Mould Boards High Enough to Take Care of All Snow.

One Man Operates the Plough.

Built of A1 Material Throughout.

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NOTE.—When Ordering, Give Width of Track, from Outside to Outside of Runners

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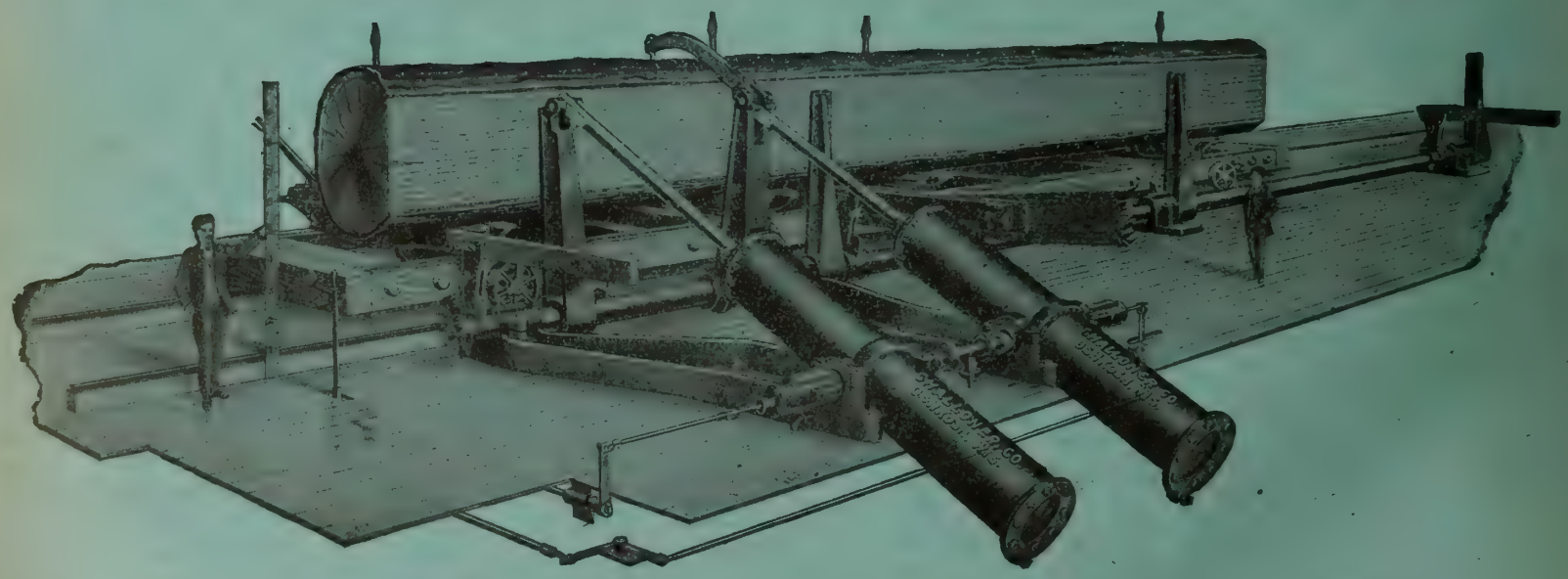

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The log is turned on the log deck, thus relieving the carriage of all strain and jar.
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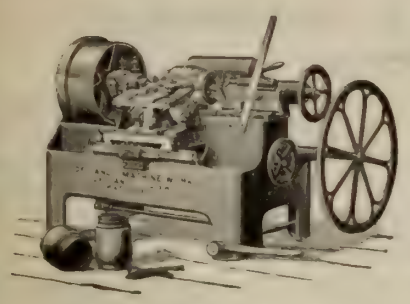
Handles of Every Kind, Insulated Pins, Spools, Bobbins, Oval Wood Dishes, and General Wood-Work.



32" SPOKE TURNING LATHE

Invented and Built by

THE DEFIANCE MACHINE WORKS,

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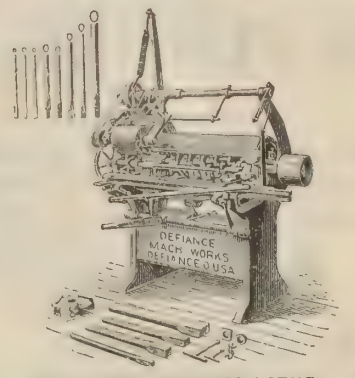

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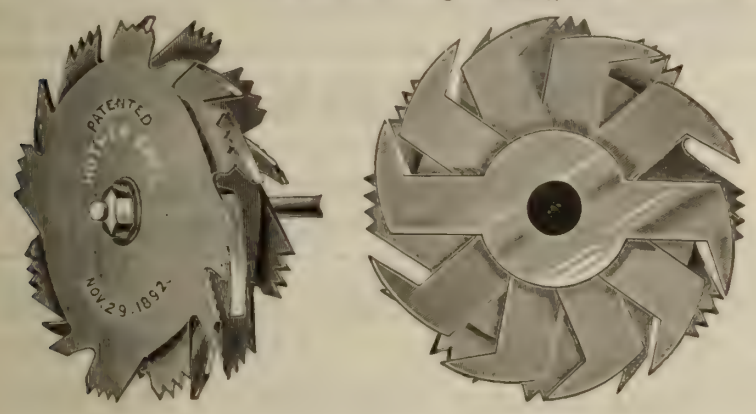
HUTHER BROS. PATENT GROOVER OR DADO HEAD

For cutting any width groove from ¼-inch to 2 inches or over



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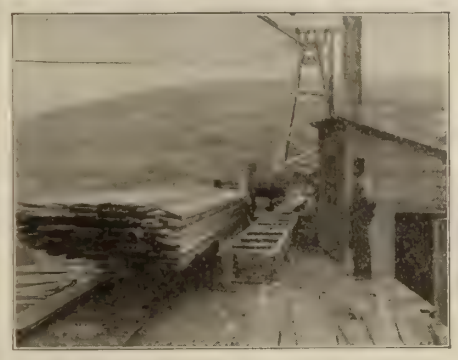

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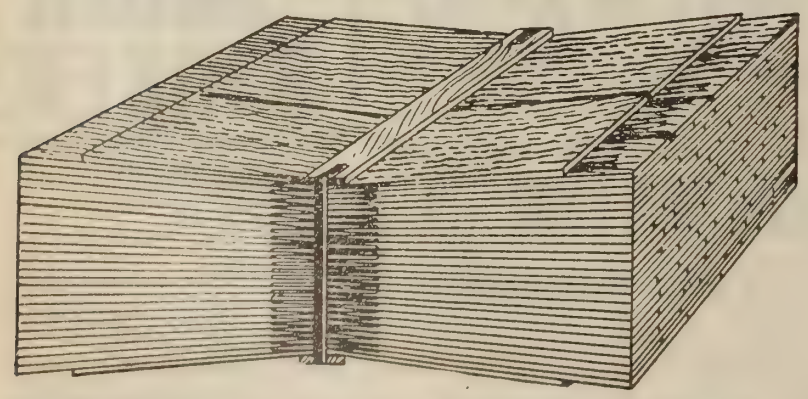

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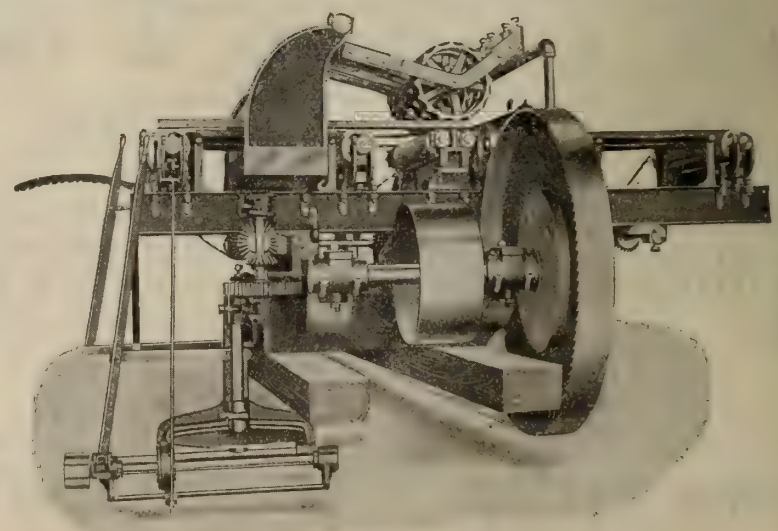

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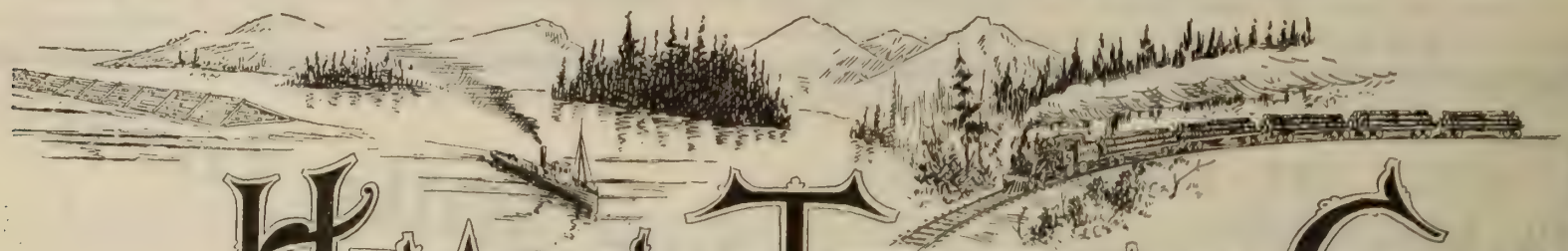

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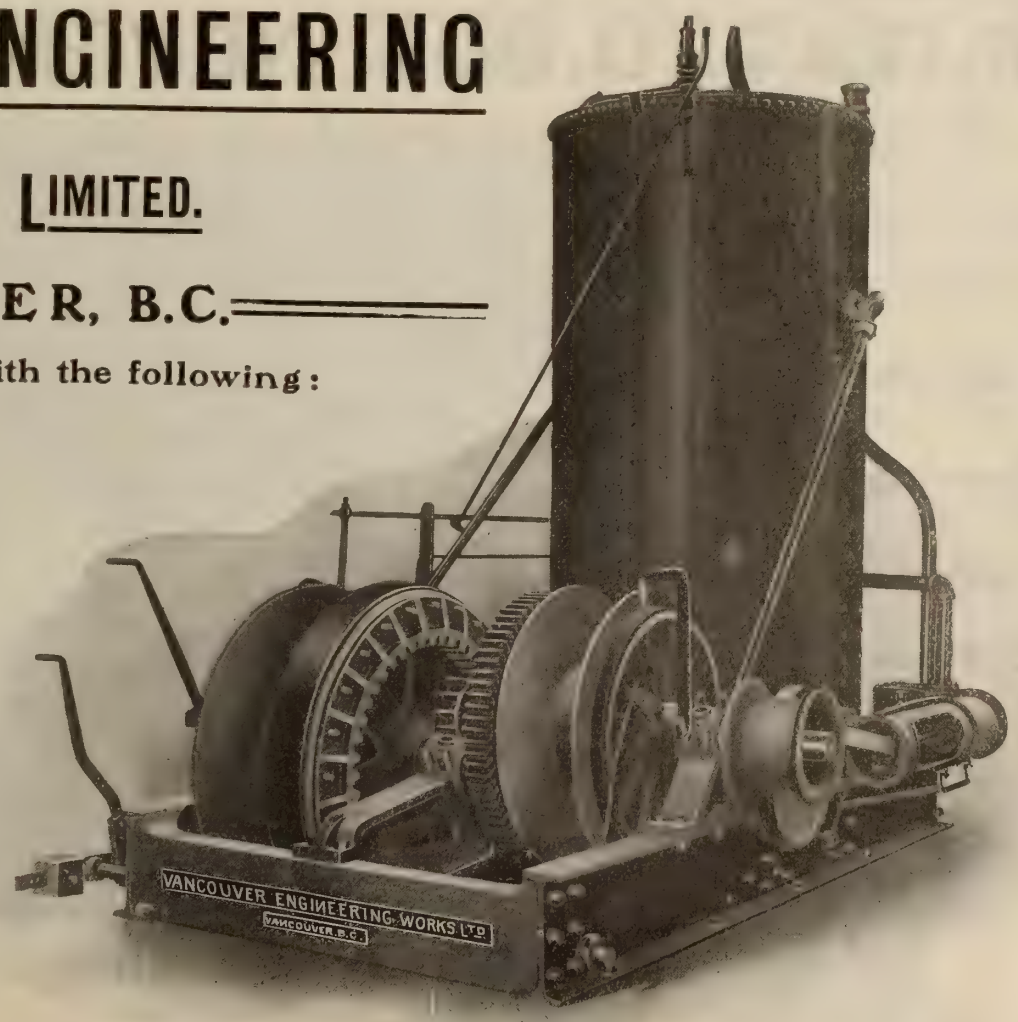

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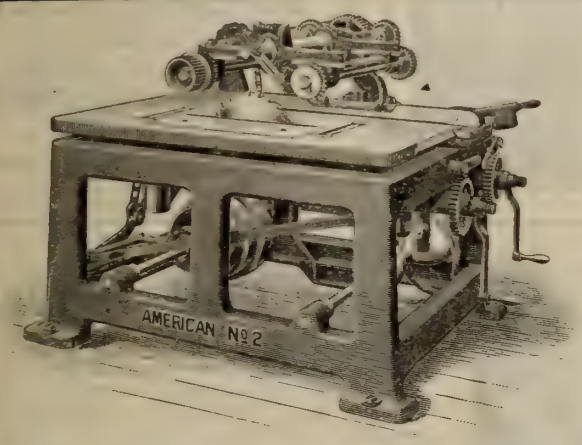

Fig. 5701. American No. 2 Self-feed Circular Rip Saw.

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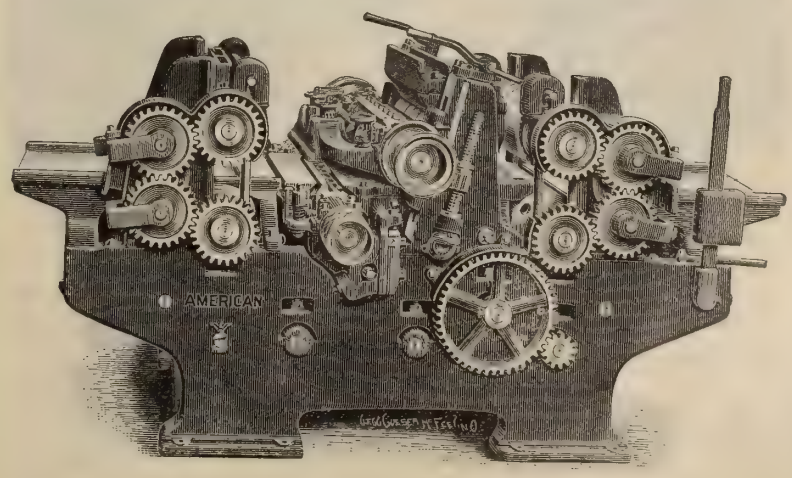

Fig. 7161. American Nos. 45 and 46 Double Surfacers.

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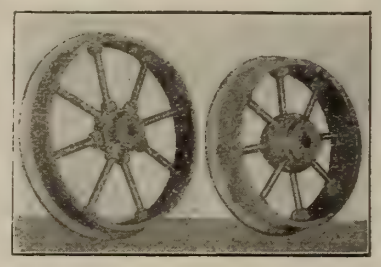

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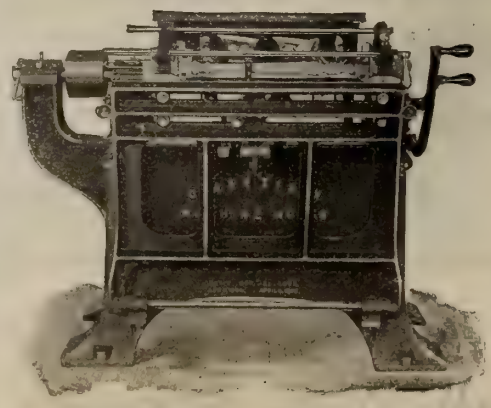

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THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in the lumber, wood-working and allied industries in Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

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TORONTO — DECEMBER 1, 1907 — MONTREAL

THE EXPORTATION OF PULPWOOD.

In another column we publish a letter written by Senator Edwards, of Ottawa, to the "Montreal Witness" re the pulpwood question, more especially as it pertains to the Province of Quebec. There is not the slightest question as to the importance to the landowners of that province of any legislation bearing on the exportation of pulpwood. As Senator Edwards remarks, any restriction to the exportation of pulpwood would circumscribe the market, but in a geographical sense only. At present the number of pulp mills in Quebec are astonishingly few, but nevertheless enormous quantities of pulpwood are being cut and exported. The expense of shipping the raw material to distant points in the Lake States is already enormous. A short time ago a cargo of Quebec pulpwood was unloaded in Green Bay City, Wis., from the steamer Carleton, loaded again in cars for mill points, where it was laid down at a cost of from $15 to $16 a cord. This appears a tremendous price as compared with the rates which prevailed a few years ago. In the vicinity of many of the American mills the supply of raw material is completely exhausted, and recourse must be had to Canadian supplies.

As for the "frenzy" into which Senator Edwards claims certain of the newspapers have unwarrantably worked themselves, the fact remains that there is every reason for concern. It has been announced during the past week that several of the one cent American dailies are doubling their prices because of the increased cost of paper. The United States imports of paper increased enormously during the past year. In the nine months ending September, 1907, these totaled $9,467,073, as against $5,818,154 in 1906, an increase of $3,648,919. In other words, American purchases of foreign paper increased by over $3,600,000 in a period of nine months. A comparison between similar periods in 1907 and 1905—in the latter the importations totaled $4,555,024—shows an increase of $4,916,649, or nearly $5,000,000. On the other hand, while in the nine months ending September, 1906, exportations of paper from the United States totaled $7,847,084, in the corresponding period this year the total was only $6,664,098, a loss of $1,183,040, even without any consideration of the higher market prices which have prevailed. The loss in export has been mainly in printing paper. In the nine months ending September, 1906, exports of printing paper totaled $3,223,957, as compared with $1,829,491 for the same period this year.

Regarding the future of the supplies for United States paper manufacturers, the remarks of an unprejudiced writer, Mr. S. Chas. Phillips, which appear in another column, are significant:

"The Americans, I admit, have come into the (Norwegian) market as heavy buyers, and so caused prices to jump up in a most remarkable manner. But the American buyers have not come to stay; that I am absolutely positive of. Canada is the natural hunting ground for American paper makers. They will, of course, take care that this shortage shall not occur very often again. They will—in fact, must—build chemical and mechanical pulp mills in Canada to supply their increasing requirements. I know from my frequent visits to Canada and the United States that the largest American paper making concerns have for some years past been acquiring some of the finest forests and waterfalls in Canada, and that they are quite ready to go ahead and build sulphite and sulphate and mechanical woodpulp plants as soon as they see the time is ripe. I have impressed on the minds of Swedish pulp manufacturers that what I have stated is beyond doubt. The International Paper Company, the Union Bag & Paper Company and the Great Northern Paper Company—three of the greatest paper making concerns in the United States, organizations with an aggregate capital of not less than £20,000,000—have invested enormous sums in Canadian forest lands and waterfalls."

The establishment of pulp mills in Canada by Americans will take place with a suddenness as surprising as has been their request for supplies, provided proper legislation is enacted. That the industry has not grown as rapidly as it should in this country is generally admitted, while the statement has even been made that in 1905 there were fewer paper mills operating in Canada than in 1888, whereas in the United States the number of such increased from 776 in 1900 to 1,200 in 1905.

According to United States Government statistics, Maine, New Hampshire, Vermont and New York produce more than two-thirds of all the pulp that constitutes the output of the mills of the United States. In 1905 the mills in these States required nearly 1,300,000,000 feet of timber, and of that quantity Quebec contributed almost one-third. New Hampshire used 70 per cent. of Quebec timber in the pulpwood industry in 1905, and last year used a still greater amount. The increase in the exportation of spruce pulpwood from Canada to the United States during the six years ending December 30, 1905, was 83 per cent.

Statistics are sometimes misleading, but the unbiased opinions of forestry experts who unhesitatingly foretell a lumber famine for the nation who employs them and the corroborative statements of practical men who would willingly tell a different tale, did the facts warrant, surely furnish sufficient evidence to show that the situation is not simply the product of a diseased mind.

NO NEED OF APPREHENSION?

It is decidedly refreshing to learn from a correspondent of "The Paper Mill," who writes to that journal under date of November 2, that the quantity of pulpwood still available in the United States for manufacturing purposes is by no means exhausted and that "while many of the pulpwood forests adjacent, so to speak, to the paper manufacturing districts are denuded, there is still an enormous acreage of pulpwood in this country that has not yet been penetrated—a supply of raw materials that will last the manufacturers of the United States a great many years. All they have to do is to go after it. The necessity of having to use American grown pulpwood might cause a slight change in the paper-making centres of this country by reason of the fact that vast areas of pulpwood timber are available here, but not in close proximity to the present paper mills. But Canada must not dream that this country is now, or will be in the near future, entirely dependent upon her for raw material for the making of paper, for such is far from fact. The probabilities are that when the new pulpwood lands of this country are finally opened new mills in new places will also be the result, but the mills will still be in this country and will not be dependent upon a foreign supply of wood."

Such a statement seems rather at variance with the widely published report of Mr. Gifford Pinchot, Government Forester of the United States, who after travelling some 5,000 miles for the purpose of making a thorough inspection of the available standing timber in the country, stated

that "the timber on public reserves and private holdings will not last, at the present rate of consumption, more than twenty years." He further estimated that the growth during the interval will serve to supply the country for five years longer, after which must come a timber famine.

The latter statement has probably been made after careful deliberation, and will soon be true of the entire American continent unless measures are taken to preserve as far as possible from wholesale denudation the Canadian forests still existing. That this policy will be carefully pursued in the future is beyond doubt, as systems of reforestation are being generally discussed and interest in the entire forestry question receiving popular attention.

In the meantime considerable misinterpretation of Canada's attitude on the pulpwood question has been made by certain American periodicals, who assume that this country is entering upon a policy of national selfishness in restricting the export of a raw material. The whole pulpwood situation is avowedly one demanding immediate and drastic legislation, not only from the point of view of Canadian industrial progress, but as a means of prolonging the life of a commodity of international importance. The rather hasty denunciations of Canada's policy that have appeared of late in print are not taken seriously by Canadians in general, as evidenced by the remarks of a subscriber, expressed in a recent communication to THE LUMBERMAN. To quote:

"I have read with interest the article in your issue of November 15 re export of pulpwood, and the comments thereon, quoted from "The Paper Mill." These comments would compare with the same made by American lumbermen generally during 1897, when we contemplated prohibiting the export of saw logs, only they then went further and made the statement that if it were done the American Government would construe it as an unfriendly act, and declare war. None of these things took place, however, but some of the individuals, who made the statement to the writer, are now operating large saw mills on Canadian soil. I was then and am now of the opinion that all raw material should be manufactured at home."

THE LUMBER SUPPLY SMALL.

The statement published in the "Toronto Globe" of November 20 with regard to the falling off in the log cut for the coming winter has elicited from "Lumberman" the following correction:

"With reference to an article which appeared in the "Globe" of November 20, a lumberman would like to state his views. The article claims that the 1907 and 1908 lumber cut will be 50 per cent. less than last season's cut, owing, first, to the alleged fact that there is a large surplus stock on hand in the yards of the producer and wholesaler, and, second, to the stagnation in the building trade. As a matter of fact, the cut will be much less than that of last season, but 40 per cent. less is a big enough estimate. The true reason of this expected shortage is the reason that is behind all slowness in trade at the present time—the money stringency. In refutation of the first alleged reason for the small cut that is expected, the writer denies the statement that there is a large surplus stock of 1905 and 1906 cut on hand in the yards. It is a fact that not 1 per cent. of the 1905 cut remains on hand to-day in any wholesale yard, and there is not more than 10 per cent. of the 1906 cut still in stock. And the holding of the 1907 cut as compared with what was in stock of the 1906 cut a year ago, there is not more than 70 per cent. One can readily see that the wholesale yards have not this alleged surplus of stock on hand. The supply of lumber in the country, therefore, is vastly smaller than it was a year ago. Also, the retail lumber merchants are carrying only about 50 per cent. of their normal stock, as they prefer, under present trade conditions, to carry only enough to turn over rapidly on a cash basis. It is seen, therefore, that the lumber supply in the bush, in the mill and wholesale yards, and in the retail yards, is exceedingly small for the season of 1907 and 1908. In the second place, the writer of the aforementioned article claims that the building trade is stagnant. Granted, but this is only temporary. So long as there is a section of the population which have not houses, just so long will the building trade continue. There are hundreds and thousands of families in this and other cities who have not houses, but who are living in roughly-thrown-together shacks, which they are occupying until they can secure better. The flow of immigration also still continues. The number of houseless persons in the country is steadily increasing, and, of necessity, houses will have to be constructed for them. The spring, therefore, will see a wonderful revival of the building trade. With the revival of the building trade, and the inevitable shortage of the lumber supply, the situation is bound to be serious. The retailer who secures his stock early for next season's trade will be wise."

BRITISH COLUMBIA LUMBERMEN ORGANIZE.

The timbermen of Vancouver, and of the British Columbia coast generally, have organized into an association known as the British Columbia Timbermen's and Forestry Association, for the protection of those interested in timber. Later the association intend to branch out to all the lumbering communities of the province. The initiation fee was placed at five dollars.

The members of the Association are:—A. F. Sutherland, Wm. Shannon, W. H. Higgins, H. Whittaker, J. H. Buck, T. F. Paterson, Capt. Magnesen, Chas. Morris, S. H. Ford, J. S. Emerson, C .O. P. Olts, H. A. Jones, Wm. Stinson, Mr. Hurbert, D. J. O'Brien, W. Ellis, D. Burton, J. M. Murray, L. L. Dickerman, C. S. Battle, G. E. Davenport, J. R. Brown, J. A. Tees, E. P. Bremner, Ward De Beck, J. H. Sanderson, E. Crockford, P. A. Wilson, Joseph Chew, John McCheyne, E. H. Moore, R. L. Scott, Robt. Gorman, David McConville, J. G. Poupora, I. L. Bain, J. S. Bain, E. Heaps, C. H. Dunlevy, J. B. McElhinney.

The following provisional officers were elected until the Association is duly incorporated:

President, T. F. Paterson; vice-president, A. F. Sutherland; secretary-treasurer, E. P. Bremner; executive, Wm. Ellis, G. D.Scott, Capt. Magnesen, Dr. Davenport, C. S. Battle, Ward De Beck, W. Shannon, E. H. Heaps.

At a meeting of the executive of the newly formed Association, Dr. Judson F. Clark, formerly Forester of the Ontario Government, was nominated for the secretaryship. Pending the final decision of the Association in this matter, and also the sanction of the directors of the Continental Timber Company, Limited, Montreal, of which company he is the managing director, Dr. Clark is acting secretary of the Association, which will shortly apply for incorporation.

EDUCATION IN FORESTRY.

There is a disposition in some quarters, says the "Toronto Globe," to urge that the establishment of a Forestry School in the University of Toronto is not a practical thing, and is not supported by practical lumbermen. Like the Ontario Agricultural College, the School of Forestry can be trusted to live down its detractors and to prove its usefulness. It has started in a small way with a class of eight students, scattered through the various years, but perhaps it is all the better thus, as the school will be able to develop naturally and to have room provided as it grows. In April the class go out into the woods for their field work. Most people are satisfied that a school to train foresters who will tell us how best to deal with one of our greatest crops is necessary, but a further proof of this is given by the fact that the National Lumber Manufacturers' Association of the United States has just given $50,000 to endow a chair of applied forestry and practical lumbering in the Yale School of Forestry. United States lumbermen have never been accused of sentimentality, and this gift of $50,000, with more to come, ought to silence the critics who think that everything about forestry can be learned in a lumber shanty in one winter.

GATHERING OF HOO-HOO AT HAMILTON.

Up and down the slope of Hamilton's far-famed mountain, the mewing of kittens will echo and re-echo on Friday, December 13, next. On the evening of that date, at 9.09 o'clock, a concatenation will be held at the Hotel Waldorf, when a number of unregenerated felines will seek light in Hoo-Hoo Land. The Hamilton members are making unusual preparations for a successful gathering and a jolly good time is assured.

Electricity in British Columbia Sawmills.

Though electricity has long been a factor in all modern sawmills for lighting purposes, it is only very recently that it has become the source of power as well as light in sawmill operations. There are fully a dozen mills in and around the city of Vancouver which are driven entirely by that unseen, yet wonderful power, whose only visible representation is the pair of wires stretching from tree to tree, and connecting the mill with the generating station, fully twenty miles away.

When Mr. C. Rummell, manager of the power department of the British Columbia Electric Railway Company, Limited, Vancouver, was at the Electric Light Convention, held last June at Washington, D.C., delegates from other parts of the continent were incredulous when he told them that British Columbia was turning out both lumber and shingles in large quantities by means of electric power.

One of the largest of the coast mills operated by electricity is that of the Western Corporation, Limited, at North Vancouver. This mill is located right in the midst of the timber, back of Vancouver, and is satisfactorily operated by two Canadian General Electric Company motors, one of 175 horse-power and the other of 85 horse-power, and a Westinghouse motor of 50 horse-power, all carrying 2,000 volts.

J. Maddaugh's Mill, Boundary Road, Burnaby B.C.

Mr. J. Maddaugh is proprietor of another electrically driven mill, located on the boundary road, southeast of Vancouver City. This is operated by an 85 horse-power alternating current 2,000 volt motor. Messrs. McDonald & Bailey are operators of a sawmill located in the thick timber of Hastings Townsite, just east of Vancouver. Here they are turning out from fifteen to twenty thousand feet per day of fir and hemlock lumber, their plant being driven by a 125 horse-power alternating current 2,000 volt Canadian General Electric motor.

Most interesting, however, is it to learn that probably the largest lumber manufacturing concern on the British Columbia coast—the British Columbia Mills, Timber & Trading Company, Limited—have adapted this power to a mill they are operating on Burnaby Lake, near New Westminster. Here they have installed three Canadian General Electric motors, one a 250 horse-power 3 phase 2,000 volt motor, and the other two 60 horse-power and 10 horse-power respectively, for the operation of the mill, which is equipped to turn out lumber, lath and shingles.

Other mills in the vicinity of Vancouver, now driven by electricity, include the following: Gibson's shingle mill, equipped with a 30 horse-power motor; Piper's sawmill on Burnaby Lake, equipped with a 100 horse-power 3 phase 2,000 volt motor, also three others carrying 220 volts and developing, respectively, 15, 7 1-2 and 5 horse-power, all Canadian General Electric motors; Geo. Doran's mill on Deer Lake, using a 50 horse-power motor; E. Mawhinney's shingle mill at Eburne, using a 40 horse-power 3 phase 2,000 volt Canadian General Electric motor; the Terminal Lumber & Shingle Company, Vancouver, using a 90 horse-power 3 phase 220 volt Canadian General Electric motor; the W. W. Stuart Lumber Company's mill on False Creek, Vancouver, equipped with a 65 horse-power motor; R. Wheldon, North Vancouver, using a 25 horse-power 3 phase 220 volt Canadian General Electric motor; and a

McDonald & Baily's Mill, Hastings Townsite.

new shingle mill on the Magee Road, between Vancouver and Eburne, which is using a 40 horse-power motor, and is right in the thick bush.

Many of these mills are portable, that constituting one very important feature of sawmills driven by electricity. Also, where it is easier or cheaper to do so, the mill can, when the nearby timber is all cut out, be moved closer to the remaining timber, and by the addition of the necessary amount of wire required, strung from tree to tree, power can easily be transmitted to the new location. Of course, in the initial expense there is a great saving by the installation of a motor, as compared with an engine and boilers, as well as a saving in the size of buildings required to contain the power plant. Furthermore, the services of at least one man can be dispensed with.

Added to all these important points there is the fire risk, or rather the absence of fire risk to be considered when a motor is used, and in that way the insurance rates can be reduced to a minimum. Then again, each succeeding year witnesses the advent of new ideas and inventions, whereby the cuttings, etc., that have been considered refuse, and good

Royal City Mill, Burnaby Lake, B.C.

only to make steam for the boilers, can be profitably worked up into saleable articles, thereby adding a new source of revenue to the mill.

Taking all these things into account, and also considering the amount of electric power that can be easily and cheaply obtained in British Columbia, it is practically a certainty that future years will see a still greater demand for electricity for sawmill purposes throughout the province.

DOUGLAS FIR.

The Douglas fir of the Pacific coast is also known commercially as yellow fir, red fir, Oregon pine and Douglas spruce. The name Douglas fir is, however, gradually becoming established. A species, Pseudotsuga taxifolia, furnishes the timber. Its range extends from lower California to central British Columbia, and from the Pacific Ocean to the Rockey Mountains. This timber reaches its best development in Canada in British Columbia. Almost pure forests are found here, which frequently yield from 50,000 to 100,000 board feet per acre. In these regions the tree will average 5 or 6 feet in diameter at the butt, with a height up to 300 feet. The trunk is straight and readily clears itself of branches.

It is possible, therefore, to obtain exceptionally large and long pieces for structural purposes. Sticks 24 inches square and up to 100 feet long are regularly listed and obtainable in the merchantable grades. The possibility of procuring such large pieces, combined with the exceptional strength and stiffness of the material compared with its weight, renders Douglas fir an ideal structural timber. It is almost entirely heart wood, and is fairly durable when exposed to the weather.

Small trees varying from 1 to 3 feet in diameter are unsurpassed for spars, owing to the straightness of the trunk, the small taper, and the great length obtainable. Douglas fir is almost exclusively used on the Pacific coast for piling for docks and foundations for heavy structures in soft ground. The standard dimensions for this purpose are 12 inches in diameter and from 60 to 70 feet long.

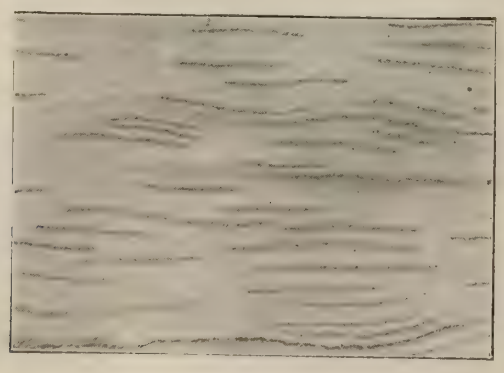
In the green logs from mature trees the sapwood forms a narrow, light-colored ring, extending usually not more than 2 inches beneath the bark. In the seasoned timber, however, it can seldom be distinguished by color. Although the grading rules allow sapwood only on the corners for the merchantable grades, lumbermen have no difficult in meeting the requirements.

The color of the wood of Douglas fir ranges from a light yellow to a pronounced red; grain varies from as few as 4 or 5 rings per inch, in small trees or in heartwood, to a fine, even grain with upward of 40 rings per inch. The rings are usually strongly marked, the summer wood being cery dense and dark, and the spring wood much softer. The wide-ringed wood is somewhat spongy. Owing to the market difference in the texture of the altenate rings and to the long, regular fibre, the wood splits easily, especially when dry. For the same reason it is particularly pleasing for inside finish, paneling, etc., when slash-sawed, for the porous spring wood readily absorbs wood stains, whereas the dense summer rings are little affected, so that any desired shade may be secured.

Douglas fir is cut into every form of lumber, from rough timbers, used in the framing of heavy structures of all kinds, where strength and durability are required, to the fine-grained, clear stock for flooring.

A PECULIAR ELM LOG.

There was recently sawn into lumber at Burnley, Ont., an elm log of very peculiar formation. As shown by the accompanying photograph, the log was full of creases from 1 1-2 to 4 inches in length and from 1-4



Sectional View of a Peculiar Elm Log.

to 4 inches apart. These creases, which were about 1-8 inch wide, extended right through the log and were lined with bark, as well formed and perfect as that on the exterior of the original tree.

The strong feeling against Hindoos imported from Vancouver, B. C., to work in the Everett saw mills has, it is said, manifested itself in maltreatment of the Orientals by white employes.

WESTERN LUMBER MARKET.

In a communication to The Lumberman Mr. Alfred W. Dyer, of Nelson, B.C., writes regarding the local lumber situation as follows:

Lumber is the only one of the three main industries of Eastern British Columbia whose condition is not satisfactory. The mines are working a greater number of men, and with the rise in the price of copper and the expected rise in the price of lead and silver, more properties are yet opening. The local hotels are being choked almost nightly with the influx of land buyers—small fruit farm settlers for the most part. Lumber alone has its conditions unsettled, and though there is the same note of future progress apparent, yet the conditions of this industry leave much to be desired.

The question affecting Eastern British Columbia is not so much the price of lumber as whether the mills will continue working. Just now 80 per cent. of the mills have closed down, some of the thrown-out labor being absorbed by the mines and some going upon the land.

The price of lumber, according to inquiries made here and around the district generally, is not likely to be affected to any very great degree by the prevailing conditions. It is perfectly true that the lumber manufacturers here have large stocks of lumber on hand in many instances. It is also as true that this lumber is not meeting with that demand which would justify its retention. It is also as true, again, that the banks are not at all inclined to advance any further sums to the lumber manufacturers in such a manner as to extend their credits. In certain weak instances this has compelled the sale of some of the lumber stocks at prices very much lower than those quoted during last summer. Such sales, however, have not been extensive, nor have they appreciably affected the stocks on hand. On the other hand, another factor has come to the assistance of the lumbermen, and that is the demand not only from the Grand Trunk Pacific, but also from the Great Northern and from the Canadian Pacific for ties and poles for the construction of new tracks all over the country. Thus, of the small number of mills that are still running, most of them are running upon the orders for ties supplied by these great concerns.

Again, on the other hand, the demand for lumber when once it springs up again, is likely to be even greater than before. Heretofore the lumberman has depended almost entirely upon the Northwest for his market, his local market not being of any very great extent. As already noted, this is no longer the case, inasmuch as the whole of the country is being rapidly settled. To take one case, that of Fruitvale, where within a comparatively short period of some three months, at least 200 new families have been induced to come upon the land.

This is only typical of conditions everywhere over the Kootenay. These things naturally create a demand for lumber which will be accentuated in the spring. It is likely, therefore, that as far as prices are concerned, lumber will not drop, notwithstanding the probable lower price of labor, since the heavy stocks on hand will be depleted before next season is far advanced by the much heavier demand locally and on the prairies. On the other hand this heavier demand will probably place the lumber industry on a far better footing fairly early in 1908. Hence the Kootenay is looking forward to a very good season next year in ranching, lumber and mining.

A RECORD IN LATH CUTTING

A record cut of lath was made in the new mill of John B. Smith & Sons, Limited, at Callander, Ont., on October 26. Under the management of A. N. Robinson there were 17,450 pieces of lath manufactured in 56 1-2 minutes, or an average of 1,000 every 3 1-2 minutes. This cut was made on a lath mill manufactured by William Hamilton & Company, Peterboro. It was operated by the following crew: William Bulger, pusher; H. Dickson, puller; D. Lamarche and William Curkin, tiers; Wilbert Fox, bolter; John McIvor, bolt puller; Harry May, Robert Hodgson and R. Sheldon, stock pickers; the tallying was done by H. O. Ogilvie, bookkeeper for J. B. Smith & Sons, and the timing by Ed. McBeth. J. B. Smith & Sons proclaim this to be the record cut of lath for the season, and would like to hear from other lath mills with records.

Messrs. Moffat, Hutchins & Company, of Cape Town, South Africa, are inquiring through their Canadian representative, Mr. Thomas Moffat, 98 Dundas street, London, for firms who could supply them with poplar logs.

THE PULPWOOD QUESTION

SENATOR EDWARD'S VIEW.

In a recent issue of the "Montreal Witness" appeared the following communication from Senator Edwards, of Ottawa, re the exportation of pulpwood:

To the Editor of the "Witness":

Sir,—I notice that of late you have opened your columns in an impartial way to a consideration of the pulpwood question, which is being agitated by the Canadian pulp and paper makers and a number of our newspapers. Your attitude seems more one of inquiry as to the true merits of the question than of partisan support of the views put forward by those advocating an export duty or absolute prevention of export; for there are those who advocate even the latter extreme position.

In your issue of the 19th inst. you set forth the views of the restrictionists; but suggest that after all their opinions may not be prompted entirely from patriotic motives; that self-interest may possibly have same influence; that there may be something that might be said on the other side of the question by pulpwood producers and sellers, and you invite a statement of their views.

I approach this subject with some hesitancy. First, I have neither the time nor disposition for newspaper controversy. And next, I am not exactly of the class from whom you invite a discussion of this matter, but am a lumber manufacturer, making plans and inquiry at the moment to embark in the near future in pulp and paper manufacturing also; at the same time I am unable to share the views of those who would hinder or restrict the export of pulpwood. I will admit at once that I am a radical free trader, believing in no restrictions or hindrances to trade, and no penalties imposed on the many for the enrichment of the few. But apart from the question of trade principle the subject is a large one, and one of the greatest importance to Canada—and more particularly the Province of Quebec, which possesses by far the greater areas of spruce timber and most numerous water powers, which, if conserved and well administered will place the Province of Quebec at no very distant day in a position as a manufacturing province which will be the envy of all the states and provinces on the continent. The competition will be as between power produced with coal at a cost of $45 to $60 per horse-power per annum, or electrical power produced by water at $15 per horse-power, or possibly less; and as coal is a diminishing quantity, and as the water powers will go on forever if not destroyed by denudation of the forests, there can be but one outcome, viz., the supremacy in manufacturing of the country which owns the greater share of water powers. In this particular Canada is supreme, and Quebec is by far the most fortunate of our Canadian provinces, being richer in water power than any other. So that, in my opinion, the subject is one to be dealt with on broad principles.

The general welfare of Quebec is the question, and not that of individuals or sections. The province has adopted the policy of placing its timber areas under license to lumbermen, to cut the timber under certain regulations. Legitimate farmers own on their farms more or less spruce timber. There are a limited number of pulp and paper mills scattered over the province. Any restriction to the exportation of pulpwood would circumscribe the market, and place the lumberman or farmer who has pulpwood to sell at their mercy. This is the condition those interests are asking for, and to promote what they have in view they have got certain of our newspapers worked up to a frenzy in the fear that in a few years our pulpwood resources will be exhausted and that there is not only the danger of dearer paper, but an exhaustion of the raw material for its production at no distant day.

It is set forth that the American supply of pulpwood is nearly exhausted, and that unless the paper making interests of that country are hindered they will gobble up our entire pulpwood resources in a very few years; and they are greatly exercised as to the future of our forests. While not among those who believe that the American supply of wood for paper making is so nearly exhausted as many think it is, I at the same time believe that they are overbuilt in pulp and paper mills relative to their supply of raw material, and that it is a convenience to get a portion of their pulpwood from Canada—a most decided advantage to the small limit holder and to the farmer who has pulpwood to sell. We have, however, among us those who would cut off this market. Again, we have those who believe that the paper mills of the United States can be transplanted to Canada at once if only the supply of pulpwood is cut off, and they would have our legislators proceed at once to enact such laws as would bring about these results. I cannot think that any fair minded, unselfish Canadian undertaking the question could support any such legislation! Canada may have, and I think she has, the greatest supply of pulpwood of any country; but there are other countries which have large quantities of the article; and it will be many years before the world will have to look exclusively to Canada for its supply; and the erection of pulp and paper mills in Canada faster than they are now being built would be simply suicidal to the paper making business in Canada. Our market is a limited one. The only market freely open to us, Great Britain, we cannot sell in profitably to-day. We can sell Great Britain pulp, but we cannot profitably sell her paper. The foreign sale of mechanical pulp is an undesirable business. I admit at once that the desirable article for us to sell is not the pulpwood or the pulp, but the finished article—paper, and I will be greatly pleased when we are in a position to do it; but we are not in that position to-day.

We cannot sell in Great Britain to-day, because of cheap and convenient Scandinavian and North of Europe pulp going into the British market at much lower rates of freight than we can supply it; and also because of the perfection of manufacture and the cheaper capital involved in paper making in Great Britain. I have just investigated the matter at considerable expense and am surprised at the conditions. One of the most perfect paper making mills in the world is to be found near Paris in France. But Great Britain is high up and almost supreme as a paper making country; and under her open market conditions, just so long as her present supply of pulp continues, we cannot hope to invade that market to any great extent in the sale of paper. The people of the United States being under tariff tyranny, we cannot at present find a market there; but in due course both these markets will be available to us in a natural way; and until they are, what is the proper course for Canada to pursue? In my opinion the proper business course is to carefully husband our timber resources; but the proper way to manage this is not by the limitation of the sale of our timber lands, and not by the restriction of the sale of the lumber produced in any form which the producer wishes to sell it in. He should be a free man to sell it in such form as he pleases, and where he pleases. But the great and important question is the administration and management of our forest areas. In pine, the Province of Quebec cannot hope for a continuous supply; it will become exhausted far too soon. But the spruce areas of the province need never be exhausted if only rational means are adopted and enforced. The question should be what shall be cut.

Now, what are the facts? In the best interests of our spruce forests, and their conservation, is it that too much of our timber is being cut annually? Not at all! It is that it is not being properly cut? I think it is reasonably safe to say that more timber dies annually in the Province of Quebec than is cut down by the woodsman's axe. The question then is: "Will this process exhaust the forest?" By no means. From sixty to seventy years is about the life of a spruce tree, and under these natural conditions reproduction goes steadily on. Then how is it that the forests are being exhausted? The answer is: By forest fires caused mostly by squatters on the limits; by camping parties; fishermen, hunters, and recently by explorers for minerals; also by the passage of railways through or near the timber areas, and by settlers on land, both legitimate and illegitimate. One most fruitful source of destruction, I admit at once, is the pretended settler buying or pretending to buy and for settlement, which in reality is intended for himself or some pirate lumberman to cut upon, smuggling og the timber, robbing both the limit holder and the Crown. And as under these circumstances there is no limit to the size of cutting, the territory so cut is exhausted entirely.

I quite admit that the high price of pulpwood in the last few years has greatly stimulated this means of devastation. But is the cure in restricting in any way the disposal of the article produced? By no means. The cure rests in a proper administation and regulating of cutting on our Crown lands, and in guarding against in every possible way forest fires.

Having said all this, I may very well be asked, then, what would your plan be for the preservation and perpetuation of the forest resources of the Province of Quebec? My answer is that two interests for the future of Quebec are paramount—the preservation of her forests and

of her water powers. Take care of the former, and the latter will take care of itself. Destroy the first, and you destroy the latter. Then the question is, Can the latter be preserved? I say yes; decidedly yes. Instead of restricting the operations of the area to be lumbered upon ncourage the operation of lumbering all over the province as soon as it practically can be done. Every square mile of the timber area of the province should be operated, thereby allowing no timber to die of old age; but, instead, cutting the old timber, and cut no timber whatever under a regulation size to be determined upon. The determination of the smallest diameter of cutting to be ascertained by such an inquiry as would establish the annual growth on a fixed area. Separate the lands only suitable for timber production from the lands suitable for agriculture, and allow no encroachment of settlement dangerously near to the timber areas. Build no railways through timber areas.

True, with all these precautions, there will be some forest fires. In time spruce areas so destroyed will reproduce; and if only the annual growth is cut on the timbered areas, and no more, I think it will be agreed that our forest resources will go on in perpetuity and never will become exhausted. It is in this manner, and in this manner alone, that the remedy can be applied, and not in export duties or in any such restrictive measure; and it does appear to me that a consideration and adoption of this plan is one more to be considered by the Canadian people than tariff wars or anything of the kind.

WILLIAM C. EDWARDS.

A DIFFERENT OPINION.

I am now on my fourth visit to Sweden this year writes S. Chas. Phillips in the PAPER MAKER AND BRITISH PAPER TRADE JOURNAL. Four visits inside of six months is a pretty good record, I think.

The cellulose makers, both sulphite and sulphate, are continuing to reap the golden harvest, which the special circumstances of the past few months have favored. Hardly a week passes without some new project for a chemical pulp plant being trotted out, and most of them will, I am quite sure, materialize, as there is not much difficulty for money to be found to build mills. The men who are putting the money down are quite satisfied that the industry is capable of still further expansion, and so the temptation to share in good fat dividends seems just to be irresistible.

But this constant augmentation of production on a large scale as I have from time to time pointed out, is sure to undermine the whole business. There is a limit to most things, but the men who are now so eager to build so many new mills refuse to believe that there is a limit to the production of chemical wood pulps. They argue with me fondly deluding themselves that the consumption of sulphite and sulphate pulp is increasing by about 20 per cent. per annum. These figures, I am quite convinced, are chimerical. The men who are embarking their capital and other people's money, too, in all these new mills will not listen to reason. They shut their eyes and ears to the exceptional conditions that have brought about the heavy demand this year. It is sufficient for them to know that the demand is apparently in excess of the supply. But very close investigation into the subject during my several months' travel in Sweden has been very instructive.

The Americans, I admit, have come into the market suddenly as heavy buyers, and so caused prices to jump up in a most remarkable manner. But the American buyers have not come to stay; that I am absolutely positive of. Canada is the natural hunting ground for American paper makers. They will, of course, take care that this shortage shall not occur very often again. They will—in fact, must—build chemical and mechanical pulp mills in Canada to supply their increasing requirements. I know from my frequent visits to Canada and the United States that the largest American paper making concerns have for some years past been acquiring some of the finest forests and waterfalls in Canada, and that they are quite ready to go ahead and build sulphite and sulphate and mechanical wood pulp plants as soon as they see the time is ripe. I have impressed on the minds of Swedish pulp manufacturers that what I have stated is beyond doubt. The International Paper Company, the Union Bag and Paper Company and the Great Northern Paper Company—three of the greatest paper making concerns in the United States, organizations with an aggregate capital of not less than £20,000,000—have invested enormous sums in Canadian forest lands and waterfalls.

The Yankee will not be caught "napping." When the time comes he will drop the Scandinavian pulp maker just as suddenly as he "took him on." Another thing I have discovered which is interesting, and that is: many of the inquiries which mills have been receiving over here the past two or three months are simply duplication and triplication of an original inquiry, which has been circulated through different sources. Sometimes the quantities have been slightly varied. This sort of thing has materially assisted in making pulp makers believe that the demand is very much larger than it really is. Therefore, with so many new mills constantly coming forward, I am quite certain that prices will fall some time next year. I don't see how it is possible to prevent this taking place. There will always be up and down movement, a sort of see-saw—"Now we go up and now we go down" sort of game.

The Swedish "news" makers had a meeting the other day for the purpose of agreeing on an advance in the price of "news." The general opinion was that 1¼d. less 10 per cent. should be the figure, and this, I think, may be taken as the average price for some time to come. The Norwegian paper makers have been invited to the meeting and dinner of the Svenska Pappersbruks Föreningen (Swedish Paper Makers Association), which is to take place in Stockholm on October 14 and 15, for the purpose of conferring on the matter of arranging uniform prices. Mr. Smidth, the managing director of the Union Company, Skotfos, "accepted," and will be accompanied by some of the principal Norwegian makers. This is a step in the right direction, and will give satisfaction to British paper makers, who have been uncertain as to how the Scandinavian makers might act in the market. It will certainly help to strengthen their hands to advance prices.

It would, in my opinion, be an excellent idea for the British Paper Maker's Association to invite representative paper makers from Sweden, Norway, Finland, Germany, France, Austria, Belgium and America to their next annual dinner, and this would afford an opportunity for an international meeting of paper makers, who could compare notes on prices and talk over other important matters for the mutual good of the trade. It would mean gold in the pockets of the paper markers all round. It is worth thinking about, and would, I feel sure, be well received in general, and would afford an excellent opportunity for fraternal and business intercourse. It is rather remarkable in knocking about the world that in almost every country one visits the paper maker blames "the other people" for taking ridiculous and unrenumerative prices, and otherwise behaving in a manner generally prejudicial to the best interests of the trade.

BOOK REVIEW.

"The Utilization of Wood Waste by Distillation" is the subject of a work by Walter B. Harper, M.S., in which the author gives an interesting and practical treatment of that very important feature of the lumbering industry. Georgia pine is the chief wood discussed, because of its richness in gum and resin. Numerous illustrations of the apparatus used in the various methods of distilling wood, together with photos and detailed descriptions of the actual processes make the book one of exceeding value to anyone interested in an industry that is rapidly coming to the front in commercial economy.

"The Utilization of Wood Waste by Distillation," by Walter B. Harper, M.S., St. Louis Lumberman, publishers, St. Louis, Mo.

In an extremely useful little pamphlet of ten pages, entitled "Canada's Approaching Problem," Messrs. Biggar-Wilson, Limited, of Toronto, have gathered together much useful information regarding the pulpwood industry in this country. The unrestricted export of pulpwood is declared to be a menace to the country, and a restriction of the indiscriminate cutting of forests, particularly in Quebec, a vital necessity in regulating water powers and sustaining agriculture. The policy of holding our own pulpwood and with this raw material building up a Canadian pulp and paper industry is declared to be not only safe in a political sense, but the only recourse open to us for self-preservation. A perusal of the pamphelt will throw much light upon a question which must presently become a great political issue. The price is 5 cents per copy, or $2 per hundred. Publishers, Messrs. Biggar-Wilson, Limited, Confederation Life Building, Toronto.

THE VALUE OF DEAD LUMBER.

Because timber is dead is not a reason why it is not good material for the manufacture of lumber. Neither is it always good when it is dead. But manufacturers need not be afraid of it, for it is very easy to determine its value, which depends more or less on how long it has been dead, and the manner in which it was killed. There are three classes of dead timber: fire killed timber, timber killed by insects, and timber killed by such other causes as drying out or lightning. Some of the insects that attack trees do so before the timber is dead, and some only attack it after it has been killed. For that reason timber which has been killed by fire, for instance, should be cut as soon thereafter as possible, if it is to be made the best use of. At that time there is no reason why it should not make as good lumber as before it is killed. Some timber, which has been dead for fifty years makes as good lumber as green timber, provided it has not been attacked by insects, and has not decayed. By far the largest amount of dead timber in the forests of the country has been killed by fire. Insect killed timber, though widely scattered, is usually restricted to small areas. Dead timber of the third class is found mainly in single trees or small groups.

The principal defect in fire-killed timber is check. This appears soon after the death of the tree, but does not increase greatly. Timber above nine thousand feet in elevation is not affected by decay for many years. Such timber has been used for the manufacture of good lumber fifty years after it was killed, and immense amounts of timber used thirty years after being killed in this manner have been found entirely free from decay. If fire-killed timber is stripped of its bark soon after burning, decay is not likely to set in, but if the bark remains, the sap wood near the surface decays quickly. The fir timber of the West will last almost indefinitely after being fire-killed, and even when flat on the ground decays but slowly. Yellow pine decays more rapidly, since it is found in low altitudes, but because of its open stand it is rarely killed by fire.

It is the popular opinion that dead timber is very much weaker than timber which has been sawed green and allowed to season, but this is not the case, and neither is it true that the timber which has been dead a number of years is weaker than green timber, and the longer it stands the weaker it becomes. By actual tests it has been proven that sound timber which has been dead for some time is almost as strong as seasoned green timber, and much stronger than green timber before it is seasoned. Seasoning adds to the strength of timber, and tests of dead timber and seasoned green timber which has been brought to the same condition of seasoning, show that dead white fir is about nine-tenths as strong as green white fir that has been seasoned.

The principal defect of dead timber is check, but that does not unfit it for use as timbers, telephone poles, railroad ties and fence posts. Because of the frequent cross-checks it can not be well used for inch lumber, but it makes fairly good dimension stock. For the manufacture of boxes and crates, dead timber is perfectly adaptable, for it is odorless and is well seasoned. Dead timber is in perfect condition for treatment with preservatives, for the moisture has evaporated from the wood, and there is no watery sap to prevent the entrance of the preservative. Very little lumber of value can be obtained from insect-killed timber. About the only part that can be used is near the heart, as the insects rarely enter beyond the sap wood, but if it is not used soon after being killed in this manner, the decay which sets in soon strikes in toward the center of the tree. Even at the best, however, insect-killed timber is of little value, because of the small portion of each tree which can be used.—Mississippi Valley Lumberman.

Harvard University has received a gift of about 2,000 acres of valuable timberland, to be used as a special adjunct to the Division of Forestry. The gift comprises what is probably the best body of timber now to be found on an equal area in Massachusetts. There are ten million board feet of merchantable lumber at present standing on the tract, nine-tenths of it white pine. This fine stand, however, occupies only about half the total area, the rest of which is covered by various types of hard wood growth, younger crops of pine, and some open ground. The lay of the land, the features of which are a stretch of three miles of the Swift River valley, the basins of two ponds, and the slopes of the well-known Prospect Hill, makes the forest cover peculiarly rich and interesting, and some fifteen miles of excellent wood roads provide access to almost any portion of the tract.

LITTLE WORK FOR LUMBER JACKS,

"The last few days have seen a big slump in the lumber labor market," writes Mr. J. A. MacDonald, of Ottawa, in a recent letter to THE LUMBERMAN. "At present the employment agencies are refusing men at any price, and the wages of those recently engaged have been decreased considerably. Most of the crews for the shanties in Ottawa and vicinity are hired by employment agencies in this city, and the men come here from a radius of hundreds of miles to hire for winter work in the northern woods. The lumber companies do very little hiring. The employment agencies say that they could now get hundreds of men at low wages if they could find places for them. Three weeks ago there was a good demand for men, and advertisements were placed in various city papers by the firms, and men from the outlying towns of Casselman, Osgoode, Whitney, Prescott, Morrisburg, and other places flocked in ready to engage for work in the shanties. Within a few days, however, the wages for men for the shanties have dropped from $35 per month to $26 and $30, and to-day places cannot be found for the applicants, even at a lower wage.

"One agency declares that they could get men at $20 a month, to cut roads, etc., if they had the opening for them. At the present time quite a number of men are seeking employment amongst the several agencies, but the answer is that they are not wanted. In the lower town hotels, partronized largely by shantymen, there are many men who came here expecting to be sent to the shanties at once. Many others have returned to their homes when they saw that there was no prospect of getting places.

"The reason for the slump is the money stringency. J. R. Booth and others have not as many camps this year as they had in other years, and many camps, which it had been intended to open this winter, have been abandoned. In all the rivers there is a large supply of logs, and the mill operators are afraid that there will be a lessened demand for lumber, in fact the price for lumber has already shown a downward tendency. The Ottawa mills are running as usual, but it is stated that at least six mills on the "Soo" line have closed down within the last few days. At Blind River a hundred men could be engaged in a few hours. Men looking for work are also plentiful at North Bay and other places. There is also no demand for mining men. In the Cobalt mines many of the night shifts have been laid off, so that miners are also more numerous than the demand.

" 'ENGLISHMEN, LABORERS FROM ENGLAND NOT WANTED FOR SHANTY WORK, BY ORDER OF ALL COMPANIES' was a notice written on a board of an employment agency, which caused some adverse criticism from Englishmen. When the proprietor was seen about this he stated that he had no option in the matter, as the companies would not receive these men if they did send them. The recent arrivals from England, he said, did not understand what was meant by shanty work, were not fitted for it, and did not like the work. Englishmen who have been in Canada for some time, and who have had experience, are, however, taken and placed where any opening is available. But in the last few days two more words are added to the notice— 'NO ORDERS.' This means that no men are at present engaged, whether they are English, French, Canadian or any other nationality."

THE LATE MR. W. J. BANNISTER.

Much regret was occasioned in Vancouver lumbering circles recently by the death on October 27 last of Mr. W. J. Bannister, of the Western Lumber Company. Deceased was born in Sussex, England, twenty-nine years ago. All his life he had been engaged in the lumbering industry, but had spent only the past three and one-half years in British Columbia, having been connected with the E. H. Heaps Lumber Company for about two years, later as buyer with the Foss Lumber Company, from which position he subsequently resigned to engage in the wholesale lumber business under the name of "The Western Lumber Company." In this undertaking he was unusually successful. In August last ill-health induced him to make a trip to England, in the hope that a temporary rest would prove beneficial. This move, however, apparently had been made too late and he passed away within a few weeks of his arrival, surrounded by his family and friends.

Managing A Jig-Saw.

The manner of starting and stopping a jig-saw which must take power from a shaft below the floor and almost vertically beneath the saw pulley, was a problem which called for considerable ingenuity on the part of the millwright. The problem was also complicated by the requirement that the saw must be started and stopped very quickly when necessary, as the work to be done required very frequent stopping to place the saw through holes for interior work. Indeed, the saw must be stopped upon an average of once every two minutes during the working period.

The Plan Adopted.

Fig. 1 represents the arrangement which was finally adopted, a diagrammatical representation only being given and many parts of the saw omitted for the sake of clearness. The saw table is shown at *a* and the saw at *e*; the crank *b* and pully *c* indicate how power is applied to the saw; while the spring *d* is responsible for the tension of the saw. A foot lever—which is not shown in the sketches—was connected to the spring and by placing the foot upon this lever the spring could be bent down to permit the saw to be unhooked from it, the arrangement thus allowing both hands to be free for handling the saw.

The floor level is at *k* and the pulley from which power was to be taken is apparent at *f*. A tightener pulley *g* was attached to a level *i*, which in turn was pivoted to the floor stand *h* in such a manner that the tightener pulley *g* normally rested upon the floor, but when the foot was placed upon the end of the lever *i*, that device was forced to the floor, as shown at *j*, the idler or tightener pulley *g* went to *k*, the belt was tightened upon pulleys *c* and *f* and the jig-saw started quickly. The floor stand *h* was not placed perpendicularly to the floor, but slightly inclined so that the lever *i* had a sidewise movement toward pulley *c* when the lever was released to stop the saw.

A block *l* of sufficient thickness to permit the lever *i* to clear crank and connecting rod *b* was fastened to the lever *i* and when that lever reached its highest position, the block *l* was jammed tightly against the side of the crank disc, just outside the crank circle, where it acted as a brake and stopped the motion of the saw very quickly. The binder pulley *g* also served to arrest the velocity of the belt when the pulley came in contact with the floor, which acted as a very efficient brake shoe for that pulley.

The brake shoe *l* was adjustable, so that when the belt was new, there need not be very much vertical movement to idler *g* to properly tighten the belt by the time the lever reaches the floor at *j*. This adjustment was always secured by the use of the requisite hole in the floor stand *h*, through which a pin was placed to hold the lever at any desired height. By this arrangement the lever *i* was located nearer the floor when the belt was new and short, but when the belt stretched the foot had to be raised a little higher because the lever went up closer to the saw table. The adjustment of the tightener pulley *g* and the belt stopping function was retained by simply blocking up under that pulley with pieces of plank until the belt would barely hang clear of pulley *f* and would drive the saw up to speed when the foot was upon lever *i*.

When a flanged pulley could be procured for use at *c*, the brake shoe *l* was made to bear directly against the side of one of the pulley flanges instead of against the disc crank *c*, as described above. But where a plain pulley must be used, the brake is applied to the crank disc as explained, and a belt box built around pulleys *c* and *g* in such a manner that the belt can not jump off sidewise from either of these pulleys.

Disposal of Sawdust.

In arranging this jig-saw, make the power shaft run, if possible, in the direction indicated by the arrow. When this is done the sawdust will not be carried over upon the belt to fall through the belt holes to the great discomfort of people in the room below. Should the shaft run differently from that indicated by the arrow, try to locate the jig-saw on the opposite side of the shaft at the point indicated by *in;* this will permit the saw to be arranged so as to face in the opposite direction, and the belt will then run in the proper direction to dump the sawdust upon the floor instead of through the belt hole.

It may seem as though the sawdust would fall through the belt hole nearly as quick as the helical springs which are provided with some of the at *n* as well as through the hole near *g*, but the pulley *c* is stationary all the time and a dust guard can easily be arranged to carry the sawdust out of the belt box, and pulley *g* being movable and the belt varying much in its path through the floor, there is little chance of so guiding the sawdust that it will not get through the floor unless the saw is fitted with an exhaust pipe for removing the sawdust. In that case, the saw may be run in the opposite direction.

It is best, though, in all cases to run the pulley of a jig-saw over toward the operator, in the way the saw is arranged in the engraving. The reason for this is that the upward stroke of the crank presses the saw toward the work and therefore lessens the strain upon the rear guide of the saw. Likewise, the downward stroke of the saw—the one which does the work—pulls the saw into the work and again lessens the pressure upon the back guide. It is the old question again—this time in a new guise—that of running a steam engine in the direction which will put the least pressure upon the upper guides of the crosshead. When the engine revolves in one direction most of that portion of pressure from the piston which is extended laterally comes upon the cap portion of the crosshead guides, while, if the engine be operated in the other direction,

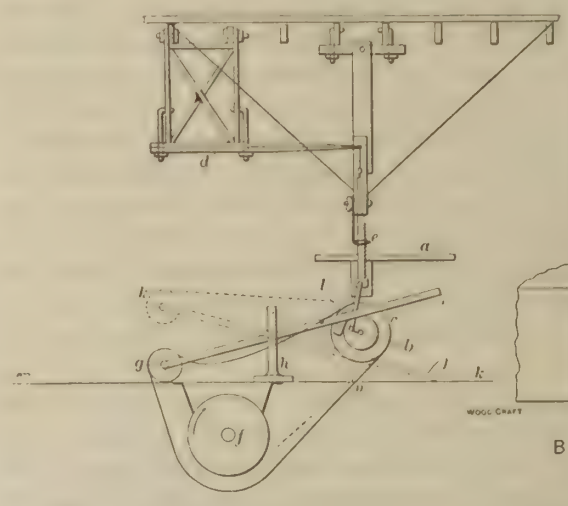


Fig. 1. Starting and Stopping a Jig-Saw.

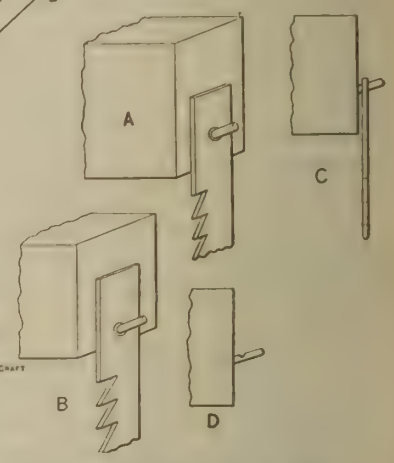


Fig. 2. Attaching the Saw to Guide.

most of that pressure is expended upon the parts of the crosshead guides which are cast upon the engine bed. Thus, in the case of the jig-saw, the saw is found to be smoother running when the pressure is expended in the direction from which the work is fed to the saw.

A Teaser for the Owner.

Some jib-saws which rattle and jump and work badly generally, even when the bearings are good and tight, are often greatly improved by running the saw pulley in the opposite direction. The writer remembers one instance in particular, which afforded considerable merriment to the mechanics employed in the shop. The writer had just completed the setting up of a new jig-saw which was driven from a countershaft located on the floor under a nearby workbench. The belt promptly commenced depositing sawdust under the bench. The writer, finding the belt slack enough to warrant it, removed the lacing, crossed the belt and replaced it upon its pulleys.

The factory owner was present during the belt-changing operation and he watched it with much interest. After the saw was in running order again, the owner approached the writer and said: "Mr. Hobart, will you tell me why you crossed the belt of that jig-saw? I do not see that it makes any difference which way it runs."

"Yes, sir," was the reply, "it makes a good deal of difference, because the saw, before the belt was crossed, went down when it ought to go up." The owner scratched his head a few times and went away evidently thinking very hard about that jig-saw. The workmen smothered the broadest of grins as they pretended to be hard at work while listening to the conversation. For more than a week the writer frequently observed the owner standing beside that jig-saw in a deep study, presumably trying hard to figure out the problem of why a jig-saw belt should be crossed in order to prevent the ups and downs of that useful tool from becoming all tangled up!

When jig-saws are tensioned by a spring, a good deal of care should be taken to see that the speed of the saw is suitable to the strength of the spring which is in use. The faster the saw runs, the stiffer must be the spring and the quicker it must act. With two springs which will

bend alike with a given weight, the better spring for a saw is the one which moves the quickest. The form of spring shown in Fig. 1 is not modern jig-saws, and where there is trouble in operating a saw at high speed it would be well to investigate the spring end of the business.

Spring Tensions.

A jig-saw should be always in tension with the spring. In other words, the saw should never be run fast enough so that the connecting rod has to push the saw upward out of its way. This would mean that the crank moves faster than the spring can act and that the saw is in danger of being broken if it be operated thus. One of the prettiest tests of a spring is to disconnect the saw and the upper sliding head, if this is possible, and connect the spring direct to the lower slide with a small chain. Start the machine as thus arranged and the least over-running of the crank speed will cause the chain links to rattle or jangle. As long as the chain remains silent, the spring is doing its full duty and there will be no trouble from that part of the machine. But when the jingle commences, then shut down that saw and never start it again until a better spring has been procured or the speed of the saw has been reduced to a point at which the chain will run silently. The chain test is one of the most effective that can be applied to a machine to ascertain if reciprocating parts are properly speeded or counterbalanced.

It matters very little how much lost motion there is in the crank connections of a jig-saw, provided the tension of the spring has been properly adjusted as has been described, for the saw may in this particular be again compared with the steam engine, this time with the single acting engine in which there is little if any thump or noise as far as the reciprocating parts are concerned—the pressure always being such as to keep the crank connections tight and bearing one against the other—either in engine or in saw, these parts cannot rattle or thump as is the case with lost motion in the parts when double action takes place.

The place where lost motion should be avoided in a jig-saw is in the top and the bottom guides of the saw——"slides," these parts are called by some people—and lost motion here permits the saw to bodily swing sidewise one way and the other when side pressure comes against the saw. Particularly is this observable when it is necessary to start a saw kerf at a very small angle with the side or end of a piece of wood. When there is lost motion in the guides the saw will swing far to one side, and when cutting does commence it is apt to swing the other way, cutting deeply into the work past the line. Quite as likely is it to do this as to bite easily into the wood and cut straight ahead.

Lost Motion on all Slides.

Another place where lost motion should never be tolerated—and where it is all too often to be found—is in the fastening of the saw to the slides. One frequently used method of attaching the saw is by means of a hole through either end of the saw and a pin in the guide over which the saw is slipped. This is a very good arrangement provided that the pin is so placed at a slight inclination to the surface of the guide that the saw is pulled firmly against the guide by the action of the spring.

Fig. 2 may serve to make this matter clear. As shown by sketch A, the pin should be inclined upward slightly for the top of the saw, and inclined downward for the lower end, thus permitting the pull upon the saw to draw that element of the machine close to the guides. This being the case, any twisting of the saw by pressure from the work is prevented and the saw stands up to its work without the least tendency to "dodge" which is so aggravating in jig or band-saws when it does happen, particularly so when the saw is a little dull or lacking in set. When the pin is inclined as shown at A, the saw is forced firmly against the guide block and lies still, but where the pin is placed as shown at B, then all sorts of bad things can and do happen to the saw.

MANAGEMENT AND FILING OF BAND SAWS.

By L. B. B. in "The Wood Worker."

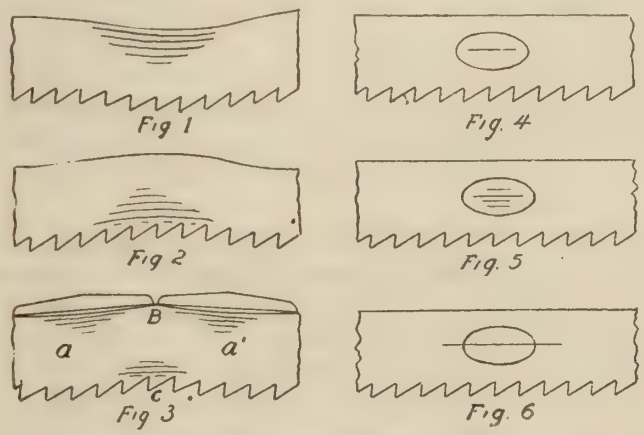
A nicely-furnished tension is the first thing for a filer's consideration. It must be put in evenly from the gullets of the teeth to the back edge. Filers disagree to some extent as to the amount of tension that should be used. I have used tension levels ground to a 32, 34, 36 and 38-ft. segment, and proved a 36 to show the right tension for 19 and 20-gauge resaws, from 4-in. to 6-in. wide, where the lumber to be resawed is a mixture of spruce, hemlock, fir, basswood and occasionally some hardwoods, such as many box manufacturers are using now.

Before commencing on the tension I always go over the back of the saw with the back gauge, and if the back does not hollow to gauge I roll along the back edge where it shows a hollow under the back gauge, like Fig. 1, and along the front like Fig. 2, where it shows high for the back gauge, or is too convex along the back.

In making tests with the back gauge one should move the gauge along only half the length of the gauge at each test. For by looking at Fig. 3 you can easily see how you might be led into the error of rolling *a* and *á* and putting a long swell in the back of the saw, that would require a lot of skill, patience and hard work to do anything like a nice job in getting back straight again; while, by placing the middle of the gauge on the high point *b*, as you would do if you placed the gauge forward half the length, and found where the saw was actually out of place, and rolled along the lines *c*, you would have fixed it right in much less time than you would spend in making *a* and *á* conform to the back gauge, which of course would be entirely wrong.

Many filers use a crowned back and are very successful, while others think the straight back best, and have equal success. If I receive a saw from the factory with either straight or crowned back, I continue to keep it as received, as the difference between them is a very small item.

After getting the edges to fit the back gauge, the saw is ready to be tensioned, and if one is careful the edges will not have to be touched again for a long time. I have worn a 19 gauge 5-in. resaw down to 4-in., and have had to touch only the back edge, and to keep that along with the toothed edge, as the grinding and work of cutting made it longer.



USING BACK GAGE—TENSIONING.

Before putting in the tension, I go over a portion of the saw with the short straight edge and make it all as nearly level as possible, with the cross-face hammer. After levelling, I raise a portion of the saw from the bench with the left hand, and with the right hand make a test with the tension level. Where I find a portion between the extreme edges that touches the drop-level and shows light on each side, it is a "fast" place, and I run the rolls over the center of it, like Fig. 4. If that does not prove enough, I roll it on each side, like Fig. 5, repeating the treatment between the lines until it conforms perfectly to the drop-level, always confining the work within the bounds of the "fast" place, and not running over, like Fig. 6, for in doing so you are liable to put as much of the saw out of place by rolling where it does not need it, as you will put in shape by rolling where it does not need it. Test with the drop-level each time you use the stretcher, to be sure and not overdo the work and have to roll the edges to let out unnecessary tension.

After going over the saw on the outside, I always turn it over and give it the same treatment on the inside—i. e., level it down nicely with the cross-face hammer to fit the short straightedge, and roll all the "fast" place as previously explained, so that all portions of the blade will conform to the drop level from edge to edge. You will find, by working on the inside, the saw will be driven through a little. Then turn the saw on the bench, and, with the short straight edge and cross-face hammer, give it the finishing touches on the outside. At the same time look carefully for any "fastness" you may have overlooked, but if all previous work was done thoroughly, the test at this time will show all right.

After this is done the saw is ready to go onto the brackets, to be swaged and ground.

LUMBERMEN'S FIRE INSURANCE.

Fire insurance is to-day the basis of all financial credit, and the subject of sound indemnity at reasonable rates is one of vital interest to all our subscribers. That the lumberman and woodworker has for a long time been forced to contribute a larger proportion of the tax for the annual fire waste than was justified by the losses of their class of hazard, is a well known fact and, up to a few years ago, the trade was at the mercy of the regular old line companies; either being forced to pay exorbitant rates or to accept companies of doubtful character and strength.

Realizing this, a number of the members of the National Wholesale Lumber Dealers' Association met in 1900 and banded themselves together as the "Lumber Underwriters," for the purpose of furnishing to the entire lumber trade first-class protection, at rates as low as consistent with the safety and perpetuity of the organization. The offices of the company were located at 66 Broadway, New York, also the headquarters of the Association, and all the underwriting is done through that office and direct with the assured. The plan adopted was to issue a straight cash policy at the lowest possible cost but without any assessment liability, such as is attached to the contract of all companies operated on the purely mutual plan. Thus the policyholders would have the advantage of getting their insurance at the absolute net figure, without assuming any liability whatsoever themselves. That this plan of operation was correct and successful from the beginning is shown to-day by the fact that a large number of representative lumbermen throughout the United States and Canada are now carrying policies in the company, and by its latest statement, which shows resources of over $200,000. Its record has been one of prompt and equitable adjustment of losses, and a fact particularly worthy of note at the present time is that not one dollar of its assets is invested in stocks, bonds or other securities, all being carried as cash for the benefit of the policyholders. There can be no doubt that an organization of such sterling worth and good management should receive loyal co-operation and support from the trade at large.

In addition to the security furnished by the assets of the company, the payment of every loss is absolutely guaranteed by the fifteen underwriters, whose names are here given: F. R. Babcock, of E. V. Babcock & Company, Pittsburgh; C. H. Carleton, of the Mills-Carleton Company, Cleveland; F. W. Cole, of New York; George F. Craig, of George F. Craig & Company, Philadelphia; Lewis Dill, of Lewis Dill & Company, Baltimore; Robert W. Higbee, of Robert W. Higbee Company, New York; W. A. Holt, of the Holt Lumber Company, Octonto, Wis.; W. C. Laidlow, of R. Laidlow Lumber Company, Toronto; Shumway Lee, of Mixer & Company, Buffalo; Robert C. Lippincott, of Philadelphia; Eugene F. Perry, secretary of the National Wholesale Lumber Dealers' Association, and attorney for the underwriters; C. H. Prescott, Jr., of the Saginaw Bay Company, Cleveland; Frank C. Rice, of Rice & Lockwood Lumber Company, Springfield, Mass.; Horace F. Taylor, of Taylor & Crate, Buffalo, and M. S. Tremaine, of Montgomery Brothers & Company, Buffalo.

INCREASING USE OF GRAPHITE PAINT.

Even the most casual observer cannot have failed to notice that within the past decade there has been a very radical change in the color of the coatings applied to railroad bridges, viaducts and other steel structures, for the purpose of protecting them from corrosion and the elements.

The change has been from reddish to grayish black.

And the reason for this is that the most exhaustive research, theoretically and practically, has disclosed the fact that the natural form of carbon—graphite—is now known and recognized throughout the world as the pigment best meeting all of the many and varied requirements essential to the production of paint that will effectively protect under all conditions the surface which it covers.

Graphite is an inert substance absolutely unaffected by extreme heat, frost, steam, water, sulphur fumes, acids, alkali, brine or, in fact by any climatic or chemical condition and these properties together with its natural affinity for oil, its ability to withstand extremes of temperature, its density, the ease attending its application and the resulting saving of labor, its remarkable covering power and the consequent reduction in first cost, and last, but not least, its long life, which eliminates the annoyance and expense of frequent repainting—saves, in fact the cost of several applications—renders it the ideal paint for either the primer or weather coats.

But to give this service in the greatest degree it must be pure, finely pulverized and thoroughly ground in the best linseed oil.

Graphite paint, then, is desirable in exact proportion with its purity, and to be of unquestionable quality, its pigment should analyze not less than 85 per cent. graphite carbon, of the amorphous variety—preferably Mexican graphite, the remaining 15 per cent. to consist principally of such silica as is naturally carried by the ore from which it is ground.

This at least seems to be the consensus of opinion among authorities in railroad painting, and as the railroad world is always alert to take advantage of new ideas, which can be shown to save time and money and give best results, any radical departure from the beaten path is always first noticeable in railroad equipment to be ultimately copied as the standard excellence by the smaller consumer—hence the gradual change from reddish brown to grayish black above referred to in the color of railroad bridges, is now apparent every where in our manpfacturing districts.

There are to-day on the market many so-called graphite paints, but neither the brand of the paint nor the reputation of the maker should be taken as prima facie evidence of quality. The careful buyer will insist upon the manufacturer's guaranteed analysis, and the shrewd buyer will get as close as possible to the source of supply—the miner of the raw material—thereby minimizing his chances of getting paint loaded with worthless and harmful adulterants.

The United States Graphite Company, Saginaw, Mich., miners of graphite and manufacturers of Graphite paint, have printed a very interesting booklet "about graphite paint," which upon request will be sent to those interested in this subject.

A LARGE SHIPMENT OF LUMBER

The largest shipment of foreign lumber in a single tow that ever arrived at the port of Sandusky, Ohio, and the biggest day's receipts ever recorded in that town, was brought there recently by the steamer John C. Pringle and barges Melbourne and D. P. Dobbins, carrying about 1,500,000 feet of white pine.

The Pringle and Melbourne had 1,143,389 feet for the Hastings-Vietmeier Lumber Company, and the Dobbins had 457,000 feet for the Sandusky Lumber & Box Company. The duty on the combined cargo of the three boats was about $3,200, which was paid before landing. The shipments came from Blind River, Nestorville and Little Current, Ontario.

RISE IN PRICE OF LARGE TIMBERS.

As intimated in the editorial columns of our last issue, British Columbia timbers have been suddenly advanced in price, the increase over the previous list price being as follows: Timbers 46 to 50 feet, $1; 51 to 55 feet, $1; 55 to 60 feet, $2; 61 to 65 feet, $2.50; 66 to 70 feet, $3; 71 to 75 feet, $2; 75 to 80 feet, $3. No price is quoted on timbers longer than 80 feet, such being subject to negotiation.

CANADIAN WOODS AND MACHINERY POPULAR IN ENGLAND.

According to Mr. J. B. Jackson, trade commissioner at Leeds, England, there is a strong demand in the North of England for Canadian turned wood products of all kinds suitable for the building, cabinet and other trades. He specifies the classes of articles required. Mr. Jackson says Canadian wood-working machinery is steadily growing in favor among the English timber mills.

AGENTS FOR TIMBER LIMITS.

Messrs. Richard T. Fisher, Austin Cary and Edward S. Bryant have established an office at 141 Milk street, Boston, Mass., for timberland and forestry work. They will make a specialty of estimating standing timber and valuing forest lands and will give advice and make plans for the management of forest growth.

Mr. Sontum, trade agent at Christiania, reports that the Swedish and Norwegian paper makers have recently met, and have decided that, as the production of news print in both countries for 1907 and 1908 is already disposed of at rising prices, a considerable increase in price should be asked for future sales.

Wanted and For Sale Department

PUBLISHERS' NOTICE

Advertisements inserted in this department at the rate of 15 cents per line each insertion, in advance. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. Fourteen lines make one inch Advertisements must be received not later than the 12th and 28th of each month to insure insertion in the subsequent issue

FOR SALE

ABOUT 100 M. PINE—ABOUT 1/5 WHITE pine—can be cut to order. Write for particulars. S. SMITH, Silver Hill, Ontario

WANTED — TEN THOUSAND CORDS Hard and Soft Wood; also same quantity of Slabs. SIMCOE WOOD AND LUMBER CO., 52 Yonge Street Arcade, Toronto.

WE HAVE FOR SALE A FEW CARS OF cedar posts and shingles, pine lath, clear face and better red pine and a good quantity of white pine and spruce lumber. JOHN HARRISON & SONS CO., Saw and Planing Mills, Owen Sound, Ont.

HAVE YOU ANY STOCK YOU WISH TO SELL? If so make the fact known to probable buyers by placing an advertisement in the "Wanted and For Sale Department." Address CANADA LUMBERMAN, Toronto.

A CROWN LAND SURVEYOR AND Lumber Cruiser of long experience wants to be placed in touch with parties who are desirous of investing in lumber lands in Alberta or British Columbia. Can furnish good references. Address Timber, care CANADA LUMBERMAN, Toronto.

Wanted

ONE TO TWO MILLION FEET WINTER cut Basswood. Sawing specification furnished upon request. Apply BOX 555, CANADA LUMBERMAN, Toronto.

FOR SALE

Small Car 1½", 2" and 3" Clear Pine.
1 Car 1" good C. & B. Soft Elm.
25,000 ft. W. Oak, will cut to order in squares 6"x6" to 24"x24" up to 40 ft.
LOCK BOX 62, Dunnville, Ont.

FOR SALE

I AM PREPARED TO DELIVER F.O.B. cars here 2,000,000 feet cedar logs cut to order into any size timbers from 4" x 4" to 12" x 12", and from 8 to 20 feet long, any time up to next May; 3,000 telegraph poles. Correspondence solicited. J. B. WINLAW, Winlaw, B. C.

FOR SALE

A GREAT MANUFACTURING SITE FOR Pulpwood Mill or large Saw Mill; with excellent large water power already developed. Also complete saw mill and planing mill with about four million feet of lumber, shingles, lath, dressed lumber. Complete outfit of Lumber Camp for about one hundred men; and the most attractive town site in New Ontario. Situated in the Town of Charlton. Good time to get at bottom price. Apply Box No. 1, New Liskeard, Ont.

For Sale

1" Maple Hard	336,000	ft.
1¼" " "	8,300	"
2" " "	37,000	"
1" Brown Ash	150,000	"
1" Red Oak	39,000	"
1¼" "	3,900	"
1½" "	2,700	"
2" "	4,200	"
1" Soft Elm	75,000	"
1½" "	9,600	"
2" "	29,800	"
1" Birch	210,000	"
1½" Beech	2,400	"
2" "	16,500	"

Write HASKELL LUMBER CO. Limited, Fassett, Que.

LUMBER BUSINESS FOR SALE

THE EXECUTORS OF THE ESTATE OF the late W. H. Crow of Welland, Ont., offer for sale the lumber and coal business lately carried on by him. This is without doubt one of the best opportunities to secure a live going business. The Town of Welland is growing rapidly and the outlook for trade in the Town is very bright. This yard has done a large proportion of the trade of the Town. The stock on hand is well sorted and well bought and amounts to about $20,000. Intending purchasers will be given every chance to satisfy themselves as to the amount of business that has been done and the value of the stock on hand. Address all communications to GERMAN & PETTIT, Solicitors for the Executors, Welland.

WANTED

CASH PAID FOR BASSWOOD, ASH, PINE and hemlock and other lumber. Send list of what you have and prices to Box 551, CANADA LUMBERMAN. Toronto.

POSITION WANTED

AS SUPERINTENDENT, MANAGER, woods or sawmill, accountant, timber cruiser, or scaler. Practical experience in every detail of lumbering operations. Best of reference. Address Box 557, CANADA LUMBERMAN, Toronto.

SAWING CONTRACT

WE ARE OPEN TO CONTRACT FOR CUTting of lumber by the thousand in any quantity from one million to one hundred million feet.
SOUTH RIVER LUMBER COMPANY, Limited
South River, Ont.

8,000 Acres of B.C. Timber

LANDS FOR SALE COMPRISING CEDAR, fir, Spruce, Cypress, situated 100 miles from Vancouver, easily logged by lake and river to salt water. Writer owner, W.A. SIMPSON, 744 Davie St., Vancouver

FOR SALE

VALUABLE PINE TIMBER LIMITS IN District of Algoma, all tributary to Georgian Bay. Also good modern band saw mill, with necessary dwellings, &c., situated near the mouth of Spanish River on Georgian Bay. The above will be sold in bulk or separately. Terms of payment very moderate to suit purchasers.
For further particulars apply to
NIPISSING LUMBER CO., Ltd.
Hamilton, Ont.

FOR SALE

Pair 30" "Victor Turbine," horizontal setting.
48" "Victor Turbine," vertical, with harness.
54" "Dominion Turbine," same.
44" "Little Giant Turbine," same.
4" and 5" Shafting, Dodge Frictions, Face Coupling, Steel Rim Pulleys.
2 Set Waterous Belt Tighteners.
All second hand, in good condition, cheap for cash.
Address P. O. Box 297, St. Catherines, Ont.

TENDERS FOR

Pulpwood Concessions

TENDERS WILL BE RECEIVED BY THE undersigned up to and including the 16th of December next for the right to cut pulpwood on certain areas tributary to the Nepigon River, in the District of Thunder Bay, and Rainy Lake, in the District of Rainy River, and make the same into paper. Tenderers should state the amount they are prepared to pay as bonus in addition to such dues as may from time to time be fixed for the right to operate a paper making industry on the areas referred to. Separate tenders must be made for each area or territory, and the successful tenderers will be required to erect a mill or mills on each of the territories or in such other localities as may be approved by the Government of Ontario.

Parties tendering for the pulpwood rights shall accompany their tenders with a marked cheque for 25% of the amount tendered, payable to the Treasurer of Ontario, and to be forfeited in the event of their failing to enter into agreements to carry out conditions, etc

With respect to the Rainy Lake Pulp Concession, tenderers will be required to make a tender for the right to cut the pine, tamarac and cedar on the territory offered. Parties making tender for these timbers to state the amount they are prepared to pay per thousand feet B.M. as bonus in addition to Crown dues of $2 00 per thousand feet B M A marked cheque for $5,000 00 payable to the Treasurer of Ontario, must accompany the tender for pine timber, and to be forfeited in the event of their failing to enter into agreements to carry out conditions etc.

No timber shall be cut on either of the Concessions of a less diameter than 9 inches, 2 feet from the ground.

The successful tenderers to enter into agreements with the Government for the erection of the mills, expenditure of money etc.

For full particulars as to the conditions, etc. application should be made to the undersigned.

HON. F COCHRANE,
Minister of Lands,
Toronto, Oct. 16th, 1907. Forests and Mines

N. B.—No unauthorized publication of this notice will be paid for.

YOUNG LUMBERMAN

KNOWING THOROUGHLY THE WORK of woods, mill, yard and office up to general superintendent, wishes position either on salary or share of profits, married; wide experience: now employed as general superintendent. Address Box 542 CANADA LUMBERMAN, Toronto.

FOR SALE

CORLISS ENGINE, FROM 300 to 400 H P.; all complete; used less than one year. Will sell at a bargain. Apply Box 554, CANADA LUMBERMAN, Toronto.

FOR SALE

20 SETS LOG SLEIGHS, WITH CHAINS.
15 sets double harness,
80 pair of blankets,
Cookery for one large camp,
And an assorted lot of blacksmith and lumbering tools.
The sleighs, harness and blankets are all practically new, having only been used one and two seasons For price apply to
MASON, GORDON & Co., Montreal, Que.

FOR SALE

TWO MILLION FEET HEMLOCK ON shore of Georgian Bay from 10 to 26 feet long. State highest price delivered in booms. Address, A. B. CANADA LUMBERMAN, Toronto.

WANTED

MAN WELL POSTED IN RETAIL LUMBER Business. Must be able to figure bills from Plans, etc Apply with references to JOHN PIGGOTT & SONS, (Lumbermen) Chatham, Ontario.

LUMBER WANTED

WE WANT 100 CARS OF LUMBER EACH week to Dress and Match, resaw, make into flooring, in transit We have the best American Machinery, and guarantee satisfaction. TAIT-CARSS LUMBER CO., Orillia.

For Sale

SAW MILL AND ABOUT 45 ACRES OF good Timbered bush, also lath and shingle machine, capacity 10,000 per day, within 2 miles of C.P R. and 4 miles of G.T.R. stations. Apply to J. D. GREENLEES, Alliston.

For Sale

150 green White Oak Piles.
1 car load Hard Maple and Beech squares.
Dry clear stock cut 1½" and 2", 20" to 4 ft. long.
1 car load 1½" and 2" Elm C. & B. dry stock.
P. D. CAMPBELL, Northwood, Ontario.

MACHINERY FOR SALE.

20 H. P. ENGINE AND 25 H. P. BOILER stationary, full front and 50 feet stack. One 12 H.P. Waterous Gasoline Engine, nearly new. One 24 inch Goldie & McCulloch Planer and Matcher. One Hay Press, will sell cheap or trade for Lumber. Write to Friesen Bros., Steinbach, Man.

FOR SALE

TEN TIMBER LIMITS IN THE INTERIOR of British Columbia. Timber on water and can be floated to main line of the C. P. Ry. Good logging ground. Will cruise over 85 million with 80 per cent good cedar balance fir, white pine and spruce. Limits have additional over 30,000 telegraph poles on or adjacent to water Timber can be shown at any time. Price only $15,000.00 with license paid for one year.
Address 556 c/o CANADA LUMBERMAN, Toronto.

FOR SALE

AT MIDLAND, ONT.

416,000 ft. 4/4 x 4" and up, Common White Pine.
20,000 ft. 5/4 x 4" and up, " " "
41,000 ft. 5/4 x 4" and up, No. 1 Mill Culls White Pine.
45,000 ft. 8/4 x 4" and up, No. 1 Mill Culls White Pine
925,000 ft. No. 1 White Pine Lath, 4 ft.
425,000 ft. No 2 " " " 4 ft.
360,000 ft. No. 3 " " " 4 ft.
Your inquiries solicited.
MERSHON, SCHUETTE, PARKER & Co.,
Saginaw, Mich.

FOR SALE

COMPLETE OUTFIT OF MODERN machinery for the manufacture of
Hardwood Flooring.
Beliot Pattern Flooring Machine.
Hoyt Pattern Matcher.
Fay Egan Double strip surfacer and planer.
Fay Egan Band Rip Saw machiner. 4" saws can also be used as re-saw.
Sherman End-Matcher and Boring machine.
Broken Roll Single Surfacer.
Buzz Planer, Turning Lathe, Etc.
All the very latest style of tools and in good order Practically new. Apply to J. S. FINDLAY, Owen Sound, Ontario.

FOR SALE

LUMBER YARD AND OFFICES AND FIXTURES of a Wholesale and Retail Lumber Business in a first class town. This is a first class going concern of old established business and in one of the best towns in Ontario, enjoying a good farmers' as well as town trade.
Reason for selling is to go to British Columbia to operate Timber Limits secured there.
For information inquire at Box 553, CANADA LUMBERMAN, Toronto.

FOR SALE

2,000,000 FT. WHITE AND RED PINE AND Spruce; 500,000 Laths P. O. Box 52, Chapleau, Ontario.

WANTED—6/4" AND 2" C. & B. BASSWOOD, Black and White Ash, Rock Elm and Beech; 1" and 5/4" Cull Basswood and Spruce 2½" Birch, 1 x 13 and 14 and up Soft Elm C & B. R. E. KINSMAN LUMBER CO., Limited, Hamilton, Ontario.

FOR SALE

WHITE AND RED OAK PLANK, ALSO several carloads of oak squares, running from 18 in. to 8 ft. long. Address Box 451, Woodstock, Ontario.

FOR SALE

An exceptionally fine sawmill at Sarnia, Ont. complete in every detail including power.

BAND RESAWS

96" McDonough band resaw, wheels 12" face.
72" McDonough band resaw, wheels 8" face.
54" Gilbert band resaw, wheels 5-½" face.
50" Fay and Egan band resaw, wheels 5" face.
42" Fay and Egan band resaw, wheels 5" face

CIRCULAR RESAWS.

56" Benjamin and Fisher, circular.
48" Joslin circular, $175.00.
48" Smith circular.
36" Walker, circular.

MISCELLANEOUS.

2 Greenlee iron frame self feed rip tables.
Williamsport self feed rip table.
Allen iron frame swing saw, NEW, $37.50.
45 two wheel lumber buggies.
10" Houston four side sticker.
Frank double spindle shaper.
Atlantic car shop tenoner.
42" Milwaukee three-drum sander.
Challoner double block shingle machine.

DUST COLLECTORS.

86" dust collector.
54" dust collector.

EXHAUST FANS

100" Sturtevant, outlet 33½" x 25½".
80" Buffalo steel plate fan direct connected to 5½" x 7" vertical engine.
76" Sturtevant, outlet 25" x 28½".
70" Sturtevant double exhaust fan.
60" Buffalo, double outlet 19" x 19".
60" Sturtevant, outlet 22¾" diam.
30" Huyett and Smith No. 5, double, outlet 9½" x 15"
24" Garden City, outlet 10 ½" x 10".

BLOWERS

96" No 12 Sturtevant, outlet 36" x 36".
63" Boston, outlet 17¾" diam.
60" Ruble, two outlets 9½" diam.
54" Sturtevant, No. 8, Monogram, outlet 18½" diam
Pittsburg three-quarter housed.
46" No 6, Sturtevant, outlet 10 ½" diam.
43" No. 8 Buffalo, 8½" diam.
40" No. 7 Champion blower, 11⅛" diam.

DRY KILN APPARATUS.

Sturtevant hot blast apparatus consisting of two 11' Sturtevant fans, direct connected to 10" x 12" Sturtevant horizontal engine. Each fan has set of heating coils containing about 3,200 ft. of 1" pipe.
Sturtevant dry kiln outfit, with 96" fan and coil, containing 4,900 ft. of 1" pipe.
Sturtevant dry kiln outfit, consisting of a 72" fan and coil, containing about 3,600 ft. of 1" pipe.
Dry kiln outfit, with 10' 6" Chicago fan, 9" x 12" engine and coil, containing about 7,980 ft. of 1" pipe
200 dry kiln trucks, with about 11" double flanged wheels.

SHINGLE MACHINERY.

Complete shingle mill outfit with engine, Perkins "American double block shingle machine, knee feed bolter, Perkins "Class B" circular bolt cut-off, 3 double knot saws, 3 shingle packers, Perkins "Class B" friction jacker, Perkins O.K. circular saw sharpener, Mitts & Merrill No. 3 hog, shafting, pulleys, etc., capacity 100,000 per day. Located in Canada.
Hall No. 6 Shingle Machine, at Sarnia, Ont.
Knee feed bolter, at Sarnia, Ont.
Shingle band cut-off and rip saw at Sarnia, Ont.
Double knot saw rig, at Sarnia, Ont.
42" six-knife wheel shingle jointer at Sarnia, Ont.
63" Rotary Saw, at Sarnia, Ont
Direct belt driven drag saw at Sarnia, Ont.
Send for stock lists of saw mill and wood working machinery, also engines, boilers, pumps, etc.

WICKES BROTHERS,
Saginaw, Mich.
Seattle Office,
412 Oriental Bldg.

FOR SALE

ABOUT 25M. FEET 1" AND 2" SOFT ELM. Address ROBT. LIGHT, Napanee, Ont.

BUY B. C. TIMBER

358 MILLION FEET OF TIMBER, FIR, CEdar, Spruce aud Hemlock Easily logged to tide water, Cruisers' Estimate, 20,000 ft per acre. Price $26,000. Apply W.H. LEMSKE, P.O. BOX 972 Vancouver.

FOR SALE

AT SPECIAL PRICE, a car of 1" and 2" birch, one car of 1" soft maple. A. P. EBERT, Wiarton, Ont.

WANTED

TO CONTRACT FOR SAWING THREEquarter million at Ancaster. Address, BOX 31, Jordan Harbor, Ont.

FOR SALE AT SOUTH RIVER, ONT., about 600,000′ of Hemlock, say 70% 2" also about 100,000′ of Birch, principally 1" and 2", and some Spruce 1" and 2". THE ROBB LUMBER CO., Ltd , Guelph, Ont.

FOR SALE

IF YOU WANT RED PINE PILES OR round timber write to us. We can supply them from 40 to 60 feet long. Address LINSDAY & MOHR Wilno, Ont., G.T Ry.

FOR SALE

BRITISH COLUMBIA TIMBER—CROWNgranted license, Dominion lease, Vancouver Island, Mainland, interior Mortgages netting 7 per cent Investments. Business property netting 6 to 9 per cent. Farm lands. Correspondence invited. ALVO V. ALVENSLEBEN, Ltd , Vancouver, B.C.

WANTED

5 CARS WHITE CEDAR PICKETS, ROUGH not pointed, equal amounts of ½" x 2"—3′, 4′ 5′. Also 18" cedar shingles. Quote price on car naming shipping point. C. A. LARNED, Phoenix N.Y.

For Sale

1 car 1 inch Soft Elm C & B.
1 " 2 " " " Common.
1 " 1 " Black Ash C & B.
1 " 1 " Maple C & B.
W. H. CUSTIS, Kettleby, Ont.

WANTED

FOR IMMEDIATE DELIVERY 4 CARS winter cut white basswood 1s and 2s, 3" and up wide 4 ft. and up long. Highest cash price paid. Send statement of quantity you have and where located to ROBERT BURY & Co., Lock Box 268, Teeswater, Ont.

FOR SALE

GOOD LUMBER YARD AND PLANING Mill in one of the best Towns in Western Ontario. Old established business, only one other concern in the Town. The above concern has an annual turn-over of about $30,000. Will sell Mill and Yard together or separate. Good Railway connections, 3 Railroads, one running through the Yard. Steam and Electric power in Planing Mill. For full particulars apply to Box 384, Woodstock, Ontario.

The tightness of the money market has caused the closing of the large mill of the Edward Hines Lumber Company at Iron River, Wis. The company will also cease operations in the woods tributary to the mill, which will throw more than 1,500 men out of employment.

Current Trade Conditions

ONTARIO.

It is extremely doubtful if even the most pessimistic reports of the present commercial situation could cause a slump in the lumber market. The statements which have appeared in the daily press to the effect that the amount of lumber at present lying in Ontario yards was unusually large, and was responsible for the proposed curtailment of the lumber cut for the coming season, are very erroneous and give a decidedly false impression of the actual condition of affairs. In the country yards of the province the amount of stock held is surprisingly small and is decreasing weekly. Wholesalers and millmen are watching the market intently and see no cause for alarm. Despite the fact that lumber never was so high in any previous year, even when building activity was pronounced, there is not the slightest break in price visible. The heaviest holders of stock declare they will carry over every foot of lumber rather than break prices. In view of this and of the marked curtailment of the cut it would be well for the buyer to make arrangements for stock before the spring building trade opens up. That there will be a rush for stock, with very little to meet a strong demand seems more than probable, and already manufacturers are sending out letters to their customers warning them against too long delay.

During the past fortnight very little stock has changed hands. Very little indeed is being done in pine. In some cases hemlock or spruce is ordered to answer purposes for which pine alone was formerly used, but the high price of this latter wood has made a substitute necessary. Despite the little business being done, a considerable quantity of New Brunswick spruce keeps coming into Ontario for miscellaneous purposes, and apparently is giving good satisfaction. A third grade laid down in Toronto at $20 answers many purposes and when well manufactured is a very cheap and satisfactory substitute for the dearer woods. A No. 2 grade at $23 is not so readily purchased, but, being remarkably sound and clear, is gradually gaining a hold on the market.

Inquiries for British Columbia cedar shingles reveal the fact that the available stock in the coast mills is small. At a recent meeting of British Columbia manufacturers it was decided to hold to past quotations, in spite of the weak demand.

In the cutting of railway ties in Northern Ontario there promises to be considerable activity during the coming winter.

EASTERN CANADA.

An unusual curtailment in logging is announced from all sections of Eastern Canada, induced principally by the financial stringency and assisted also by the small demand at present existing for all classes of lumber. Operators on the St. John river pronounce this the worst season for work in the woods that they have experienced for 25 years. Up to date there has been a decrease of 50 per cent. in the cutting, rough weather and flooded streams making work very difficult.

For the first time in many years the St. John river is practically clear of logs. It is estimated that more than 135,000,000 feet of logs were handled in New Brunswick rivers during the past season, 100,000,000 of which was cut last winter. For this season it is estimated that the total cut to come down to the booms of the St. John River Log Driving Company next spring will not be more than 60,000,000.

A forecast of the cut on the Tobique river for the coming season shows a reduction of about 60 per cent., while on the Restigouche the cut will probably total only 52,000,000, as compared with 75,000,000 last year.

This will be the first winter in many years that the mills have not run to their fullest capacity, but the ultimate results will probably be the restoration of the Eastern Canadian lumber market to its wonted strength.

WESTERN CANADA.

Many of the largest logging camps on the Pacific coast have already closed and it is conceded that within a short time this industry will have assumed very limited proportions. The Hanbury Company, of Brandon, who have been in the habit of sending from 150 to 200 men into the bush each year, are, it is said, not cutting at all this winter, and the same is true, in a greater or less degree, of all operators throughout Western Canada.

Despite the lack of orders, prices at the mills of both lumber and logs are well maintained, and no prospect of a slump appears at all probable. Among the smaller mills a little cutting in price is being done here and there, but holders of stock are satisfied that ultimately business will brighten and lumber be once more in strong demand.

UNITED STATES.

In view of the conditions of trade, it is said that a number of the white pine mills have closed down, and very little material will change hands for some time to come. Already cancellations of orders are not uncommon, some of the railroad companies having cut down their orders to a considerable extent. Business everywhere is only for immediate requirements.

Country stocks of hemlock are well sold out now, it is thought, and the unusual depression in this wood must soon give place to a moderate demand. Stocks are nowhere large and prices remain steady.

The demand for eastern spruce is not active, although Boston reports state that some buyers are interested in fair sized lots for immediate shipment. In a few cases also, where prices appear reasonable, buyers are willing to place the spring.

For hardwoods there is a very small demand, although prices are being well maintained for everything on the list and small orders from country yards keep up an appearance of activity .

GREAT BRITAIN.

On account of the stringency in the money market and the high rate of discount now ruling, the lumber business is unusually lax. Sellers at the exporting centres are not pressing their stocks upon the markets.

The shipments of spruce from New Brunswick are about at an

DRY STOCK READY FOR QUICK SHIPMENT

12 cars 1 x 18 to 23" panel and No. 1 Poplar.
6 " 1" 1st and 2nds Poplar.
6 " 1" No. 1 common Poplar.
6 " 1" No. 2 " "
8 " 1" mill cull Poplar.
2 " 1 x 18 and wider panel and No. 1 Cottonwood.
5 " 5/4 No. 1 common Cottonwood.
5 " 1 x 13 to 17" box boards Cottonwood.
20 cars 1 x 8 to 12" box boards Cottonwood.
19 " 1 x 13 to 17 1st and 2nds "
21 " 1 x 13 to 17 No. 1 common "
20 " 1 x 6 to 12" 1st and 2nds "
15 " 1 x 4" and wider No. 1 common Cottonwood
20 " 1 x 4" and wider No. 2 " "
15 " 4/4 1st and 2nds plain red or white Oak.
24 " 4/4 No. 1 common plain red or white Oak.

AMERICAN LUMBER AND MANFG. CO., PITTSBURGH, PA.

Cedar Posts Wanted

WANTED—40,000 Cedar Fence Posts, 5 inches and up at Top, and 8 feet long, Peeled. Must be sound quality and straight.

Quote lowest price F. O. B. Cars, Terms Cash, less 2 per cent.

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SPRUCE

1x4, 5 & 6 x 10/16 ft. Spruce Flooring
N. B. Cedar Shingles
Spruce Lath
EVERYTHING IN SPRUCE

Campbell-MacLaurin Lumber Co.
LIMITED
Board of Trade Building. Montreal

end, although much lumber purchased by British importers, it is said, has been paid for and still lies in the manufacturers' yards. Values have continued to improve slowly and the spruce market is in a fairly satisfactory condition. Prices for pine deals continue firm. The importations having been barely in excess of those for 1906.

OTTAWA VALLEY LETTER

(Correspondence of THE CANADA LUMBERMAN.)

Ottawa, Nov. 25, 1907.—According to the estimate of J. R. Booth's shippers there was a falling off in the quantity of lumber sent out of the city by water during the past season. Mr. Booth has just wound up shipments by canal and river and reports the quantity delivered less than last year, but as good as the average. There was no falling off in middle classes of pine, although prices were firmer than last year. It is not probable that water shipments would have been any less than last year from any of the mills if they had not been from two to four weeks late in starting. The prospects are that Mr. Booth will do considerable shipping by cars all winter. There is less difficulty in procuring cars in the Ottawa district than there was a short time ago.

The W. C. Edwards Company have taken out an additional building permit for sheds in its reconstruction work at the mouth of the Rideau river. The sheds will cost $4,000 and will be concrete, like the sash and door factory, which is nearing completion. In using concrete the Edwards Company is following the example of the other great lumber manufacturer, J. R. Booth, who is erecting a large sulphite factory of that material. Building has progressed so satisfactorily with the Edwards Company that they expect to have the sash factory and planing mill in operation before January 1st.

The mills around Ottawa are running at full blast. The demand for lumber is sufficient warrant for manufacturers to saw until they are compelled to close down. There has scarcely ever been better water power for this time of year. While the rains are a drawback to log making, lumbermen, nevertheless, derive advantage by reason of the cheap motor power afforded and the better movement of logs in the drive. Some of the pulp men complain of wood being hung up on the tributary streams, but the lumbermen seem to be getting along better than usual in this respect.

Manufacturers report no change in the quietness of the lath market, which became noticeable a few weeks ago. Prices are not changing, however, and holders of stock expect to realize well enough before the end of the season. The trade in railway ties is exceedingly active, and the quantity sawn in Ottawa is very large. Steady shipments of ties are going out from Booth's mill all the time.

The competition in buying logs on du Lievre is noticeable in the prices, and farmers and settlers above High Falls will derive considerable benefit from it. This circumstance, together with the general rise in pine, spruce, hemlock and basswood, will add about $100,000 to the outlay of lumbermen in that locality. The James MacLaren Company, Shearer, Browne & Wills, of Montreal, who recently took over W. H. Kelly's mill at Buckingham, are buying large lots of logs from jobbers in addition to operations carried on by themselves. In many cases the wholesale price has advanced four dollars per thousand feet over other years. W. H. Kelly, of Buckingham, has bought new limits and purposes erecting a mill that will begin operations next spring.

The trials arising out of the strife between the James MacLaren Company, of Buckingham, and their employes, October 8, 1906, when two strikers and one constable were killed in the riot, concluded the other day in Hull, when six strikers were sentenced to two months each in jail on the charge of rioting. The charge of manslaughter against them was not proven. All the men tried from the MacLaren side were previously acquitted.

A. F. Holden, Pres. J. M. Diver, Genl. Mgr
F. H. Goff, Vice-Pres. E. C. Barre, Ass't-Mgr

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PLANING, MATCHING, RESAWING, SIDING, FLOORING, MOULDINGS
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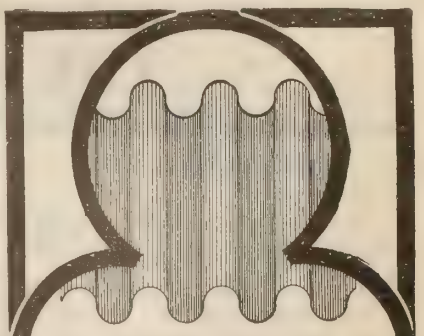

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Absolutely free from defects—made from very finest sheets.
Each sheet is accurately squared, and the corrugations pressed one at a time—not rolled—giving an exact fit without waste.
Any desired size or gauge—galvanized or painted—straight or curved.
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MANUFACTURERS OF
Pine and Spruce Lumber
Lath and Rossed Pulp Wood
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We have over 150,000 acres of finest timber. If you are interested on a big scale it will pay you to write.
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Timber and Real Estate, Victoria, B.C.
27 miles Cedar and Spruce, will cruise twenty thousand to acre or better. Price $2.50 per acre.
45 miles on Skeena, will cruise fifteen thousand feet to acre. Price $1.25 per acre.
If you are interested in timber write us.
Correspondence solicited.

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BRITISH COLUMBIA SHINGLES
Apply to
LESLIE & CRAWFORD
Vancouver, B.C.

THE IMPERIAL LUMBER CO. LIMITED
Mills: LATCHFORD, ONT.
Branch Offices: Manchester, Eng. North Tonawanda, N. Y.
Specialties: **GOOD SIDINGS, WHITE PINE, HEMLOCK**
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FOR SALE
200 M 1 x 4 and up Spruce Boards
100 ,, 2 x 4, 2 x 6, 2 x 8 Spruce
500 ,, Pine, 1 in., 1½ in. and 2 in.
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THE J. B. SNOWBALL COMPANY, LIMITED
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MANUFACTURERS AND WHOLESALERS OF
LUMBER
SPRUCE - SPRUCE
Always in the Market for Mill Cuts Always for Sale
149 Broadway, NEW YORK

THE NEWS

The new shingle mill of the Brunette Saw Mills Company, B.C., has just been completed.

A workman named Carl Munsell, engaged in a saw mill at Armstrong, B.C., was killed by a blow in the abdomen from a piece of lumber hurled through the air by a saw.

The Morse Hardware & Lumber Company, Limited, with head office at Swan River, Man., have been granted a license to carry on business in the Province of Manitoba.

A hand logger named Patrick Cummings, employed near Chatham Channel, B.C., recently met his death in a log slide, which carried him down the side of a mountain into the water.

The lumber and coal business carried on by the late W. H. Crow, of Welland, Ont., is advertised for sale by the executors' solicitors, German & Pettit, of Welland. The stock amounts to about $20,000.

Paul Martin, lumber dealer, of Bonfield, Ont., is reported to have recently assigned to J. H. McCurray, of North Bay. An assignment has also been made by T. H. DeCew & Son, Bruce Mines, Ont.

Tenders are invited by the managers of Dr. Barnardo's Home, Winnipeg, Man., up to January 1st, for the material in the Home building at the industrial farm near Russell, containing approximately 80,000 feet of pine lumber.

The Columbia River Lumber Company and the Palliser Lumber Company, of Golden, B.C., have closed down for the winter season. A large number of men are retained, however, to prepare for the opening up in the spring.

The Empire Manufacturing Company, of Vancouver, are supplying the J. B. Dougan & Sons' logging camp on Gambier Island, Howe Sound, B.C., with a 10 1-2 by 10 1-2 Phoenix yarding engine, made at their new works in Vancouver.

The Bathurst Lumber Company, with head offices at Bathurst, N.B., have been incorporated with a capital stock of $100,000. The incorporators are Angus McLean, M. E. Preisch, Burton Jackson, C. M. Carrier and Hugh McLean, all of Buffalo, N.Y.

An option has been secured on a large timber tract of 20,000 acres on Vancouver Island by the Rupert Timber & Lumber Company, of Spokane, Wash, lately incorporated with a capital of $200,000. The contract price is reported to be $81,000.

B. Maple, general executive assistant of the C. P. R., accompanied by other officials, paid a visit to Vancouver Island a short time ago in connection with the Esquimalt & Nanaimo Railway Company's extension and for the purpose of selecting mill sites.

J. D. McLean, Secretary, Department of Indian Affairs, Ottawa, wants tenders up to December 5th for the following timber, damaged by fire: Jack pine and tamarack, estimated as being sufficient to make 56,000 railway ties, and 7,000 feet of red pine.

The Alberta Lumber Company, Limited, of Vancouver, have ordered a 22 by 30 inch Atlas engine, capable of developing 342 horse-power, for their saw mill on False Creek. The engine is being obtained through the A. R. Williams Machinery Company of Vancouver, Limited.

Whilst felling trees at St. Jovite, Que., a lumberman named Joseph Huot literally cut his leg off. He swung at a limb of a tree and missed, the axe striking his leg and nearly severing the member. He is now at the General Hospital, Montreal, where he lies in a serious condition.

F. H. Coarson, of Colebrooke, N.H., has acquired a mill site at Lynds Cove, Que., at the mouth of the Grand Cascapedia river. It is his intention to build a large log lumber mill with shingle and rossing mills attached. Additional wharves will also be built. The estimated output of these mills is expected to be from five to six million feet a year.

The shareholders of the A. L. Wright Lumber Company, Salisbury, N.B., passed a resolution a short time ago in favor of the liquidation of the company. The liabilities are estimated at $170,000 and the assets are nominally about the same. The embarrassment of the concern is attributed to the stringency of the money market and to extensions of the plant.

Vancouver's prospects of becoming the great centre of the North American lumber trade are being considerably increased by the aggressive plans of the Redcliffe Lumber Company, of Duluth, Minn., who have purchased extensive holdings on the west coast of Vancouver Island and secured a site for the erection of a mill that will cost half a million dollars and have a capacity of 250,000 feet a day. The company are now reported to be the largest holders on the Pacific coast.

In connection with the new Howe bridge at Fernie, B.C., the Great Northern Railway Company have placed a large order with the Royal City Lumber Company, New Westminster, B.C., for several large timber trusses, 75 feet in length, 18 inches deep and 9 1-4 inches thick. The Royal City Company have closed their shingle and cedar mills for a short time and the sash and door factory will be put on half shift, but the operations of the main mill will be extended throughout the winter months.

Application has been made by H. A. Mellon, Vancouver, for power from the Rainy River or Cates' Creek for the operation of a pulp mill in connection with a pulp and paper industry, which will be established at a cost of $1,000,000. The mills will cover eleven acres of ground. Monroe Furguson, of the same city, made an application to develop power from Stewart Creek, but this was dismissed owing to the opposition of the Abbotsford Lumber Company, who are planning the erection of a shingle mill at the Creek.

An anusually destructive fire broke out at the premises of the Rat Portage Lumber Company, Winnipeg, on November 20. The blaze was a most spectacular one, attracting a crowd of fully 20,000 people. Although the fire department turned out in full force and did excellent work, it was nearly six hours before the flames were subdued. There is a strong feeling in some quarters that the fire was of incendiary origin, but it is quite possible that the conflagration was caused by sparks from one of the C. P. R. locomotives. A conservative estimate places the damage at $144,000. The insurance on the burned properties is estimated as follows: Rat Portage Company, $115,000; Frost & Wood, $1,000; Merrick-Anderson, $20,000; total, $136,000.

Saw Mill at Rainy Lake, Ont. Yards and Planing Mill at Hamilton, Ont.
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HAMILTON, CANADA

Blower Systems
FOR ALL PURPOSES
We make a specialty of **piping systems for removing shavings and sawdust of woodworking factories** and feeding it automatically into the furnace.
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RAILS AND TRACK SUPPLIES
New and Re-Laying from 12 to 60 lbs. per yard with fastenings; for Lumbering, Mining and Contracting Work. Also about 25 tons of good second-hand Boom Chain 5/8" and 3/4". Immediate shipment. Get our prices before purchasing.
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The Victoria Harbor Lumber Company Limited

Manufacturers of

Lumber, Lath and Shingles

Mills at Victoria Harbor, Ont. Head Office, 32 Church Street, TORONTO, ONT.

ANNUAL CAPACITY OF MILLS (Daytime only): Over 50,000,000 ft.

EQUIPMENT: 1 circular, 2 gangs, 1 double cutting and 3 single cutting band saws, large timber sizer and timber boring machine.

SHIPMENTS: 1905, by rail 37,942,186 feet.
by water 13,099,104 feet.
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PLANING MILL: With 5 large planing and matching machines, self-feeding rip saws and other equipment.

Fully equipped dry kiln, machine shop, blacksmith shop, electric light plant and fire station.

FIR, CEDAR and SPRUCE TIMBER

THE NORTH BRITISH COLUMBIA EXPLORATION CO., Limited own and control extensive Timber Limits throughout British Columbia.

R. C. MACDONALD, President, WINNIPEG, MAN.

H. P. SIMPSON, Secy-Treas., VICTORIA, B. C.

OFFICES: Victoria, Vancouver, Winnipeg

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Great Care in the Manufacture of our

SPRUCE LUMBER AND LATH

Has Given Us a Long List of Satisfied Customers.

Send Us Your Orders
We Ship Promptly

The Great West Lumber Co.

Box 218 Winnipeg, Man.

Mills at Greenbush, Sask.

The Rat Portage Lumber Co. Limited

(WITH MILLS AT WINNIPEG, VANCOUVER, HARRISON RIVER, KENORA, RAINY RIVER AND BANNING.)

MANUFACTURERS OF

LUMBER, LATH, SHINGLES, SASH AND DOORS

And all kinds of Woodwork and Interior Finish. Also Box Shooks and Packing Cases. White and Red Pine Lumber, Maple Flooring, Hardwood Lumber, Turned and Band Saw Work, Cedar Posts and Poles, Tamarac Piling, etc.

Our Vancouver Mill Cuts High-Grade Cedar, Fir and Spruce Lumber and Red Cedar Shingles. Winnipeg Mills cut Pine, Tamarac and Spruce Lumber

ADDRESS HEAD OFFICE RAT PORTAGE LUMBER COMPANY, Limited, WINNIPEG, MAN.

D. C. CAMERON, PRESIDENT AND GENERAL MANAGER.

THE WESTERN LUMBER CO.

633 Hastings St. - VANCOUVER, B. C.

WHOLESALE DEALERS IN

COAST LUMBER and SHINGLES - TIMBER LANDS

CURRENT LUMBER PRICES WHOLESALE

TORONTO, ONT.

CAR OR CARGO LOTS.

1 inch No. 1 Pine cuts & better	$49 00	51 00
1¼ inch No. 1 cuts and better	54 00	56 00
2" No. 1 Cuts and Better	56 00	58 00
1¼ in. No. 2 Pine cuts and better	46 00	47 00
2" No. 2 Pine Cuts and Better	48 00	50 00
1¼ inch No. 3 Cuts and better	42 00	44 00
2" No. 3 Cuts and Better	44 00	46 00
1 in. Pine Dressing and better shorts	28 00	30 00
1x4, 6and8common	27 00	28 00
1 x 10 common	30 00	32 00
1 x 12 common	34 00	36 00
2 x 10 common	28 00	30 00
2 and 3 x 12 common	34 00	36 00
1 x 10 inch box and common	27 00	29 00
1" mill run sidings	28 00	29 00
1x10 and 12 mill culls	22 00	23 00
1 inch mill cull Sidings	21 00	22 00
1" dead cull sidings	15 00	16 00
1¼ inch Flooring	32 00	34 00

HARDWOODS—PER M. FEET CAR LOTS.

Ash White, 1sts and 2nds, 1 to 2 in.	$36 00	38 00
Ash, Black, 1sts and 2nds, 1 to 2 in.	33 00	35 00
Ash, Black, mill run	26 00	27 00
Birch, common and better, 1 in.	24 00	25 00
Birch, common and better, 1½ to 3 in	26 00	27 00
Birch, mill run	21 00	22 00
Basswood, common and better, 1 in.	25 00	26 00
Basswood, common and bet., 1½ to 2 in	26 00	28 00
Basswood, mill run	22 00	23 00
Soft Elm, common and better, 1 in.	25 00	26 00
Soft Elm, common and bet. 1½ to 2 in	27 00	28 00
Soft Elm, mill run	22 00	23 00
Rock Elm, common and better, 1 in.	26 00	28 00
Rock Elm, common and bet. 1½ to 2 in	28 00	30 00
Rock Elm, mill run	22 00	23 00
Soft Maple common and better, 1 in	21 00	22 00
Maple common and better, 1½ to 3 in	24 00	26 00
Maple, mill run	20 00	21 00
Oak, red, plain, 1sts and 2nds	48 00	50 00
Oak, white, plain, 1sts and 2nds	44 0	50 00
Oak, quartered, 1sts and 2nds	75 00	80 00
Hickory, 1sts and 2nds	38 00	40 00

Spruce mill run 24 00 25 00
Spruce mill culls 17 00 18 00
Hemlock, 1x4 to 8 in 19 00 20 00
2x4 to 8 in., 10 to 16 ft. 22 00 23 00
2x4 to 10 inch, 18 ft.. 22 00 24 00
Clear inch B.C. cedar, KILN dried 54 00
Clear inch B.C. cedar air dried boat lumber 57 00
Douglas fir dimension timber, up to 32 feet 37 80
Fir flooring, edge grain ... 44 00
1½ in. No. 1 4 ft. Pine Lath 4 75
1½ in. No. 2 4 ft. Lath 4 25
1½" No. 1 32" pine lath 2 25 2 50
1½" No. 1 4 ft. hemlock lath 4 00
XXXX Pine Shingles 3 90
XX Pine Shingles .. 2 60 2 75
X Pine Shingles .. 90
XX Cedar Shingles 3 00
B. C. Shingles
XXX 6 butts to 2 in. 3 85
XXXX 6 to 23-16 in. 4 07
XXXXX 5 to 2 in. . 4 50
XX No. 2, 6 to 2 in.. } 3 00
XX " 6 to 23-16 in. }
Red pine, clear and clear face... 35 00 37 00
Red pine, common 25 00 27 00

BIRCH.

14 Inch	16	18
16 "	26	28
17 " "	30	32
18 " "		

SARNIA, ONT.

UPPERS.

1 in., 8" and up wide	$78 00
1¼, 1½ and 2" "	78 00
2½ and 3" "	86 00
4" "	91 00

SELECTS.

1 in., 8" and up wide	69 00
1¼, 1½ and 2" "	68 00
2½ and 3" "	81 00
4" "	86 00

FINE, COM. AND BETTER.

1 x 6 and 8"	45 00
1 in., 8" and up wide	55 00
1¼ and 1½" "	57 00
2" "	58 00

FINE COMMON.

2½, 3 and 4"	76 00 81 00

NO. 1 CUTS.

1 in., 8" and up wide	41 00
1¼ in. "	50 00
1½ in. "	50 00
2" "	54 00
2½ and 3" "	70 00
4" "	75 00

NO. 2 CUTS.

1 in., 6" and up wide	24 00
1¼ "	39 00
1½"	39 00
2" "	42 00
2½, 3 and 4" "	57 00 59 00

NO. 3 CUTS.

1 in., 6" and up wide	21 00
1¼ and 1½" "	30 00
2" "	30 00
2½, 3 and 4" "	40 00 45 00

MILL RUN

1" x 4"	25 00
1" x 5"	27 00
1" x 6 and 8"	27 00
1" x 10"	29 00
1" x 12"	31 00
1" x 13 and up	31 00
1¼ x 4 and 5"	$28 00

NO. 1 BARN.

1 in.	$28 00 to $37 00
1¼, 1½ and 2"	33 00
2½ and 3"	35 00
4"	40 00

NO. 2 BARN.

1 in.	27 00 to 31 00
1¼, 1½, and 2"	28 00
2½ and 3"	30 00

NO. 3 BARN.

1 in.	25 00 to 28 00
1¼, 1½ and 2"	25 00 to 28 00

BOX.

No. 1, 1", 1¼, 1½, 2	22 00 to 24 00
No. 1 mill culls, 1, 1¼, 1½, 2"	18 00 to 20 00

MILL CULLS.

Mill Run Culls 1"	17 00
1", 1¼, 1½ and 2"	18 00
No. 2, " " "	16 00

LATH.

No. 1, 32" "	1 75
No. 2, 48" "	4 00
No. 1, 48" pine	4 50

B. C. FIR TIMBER—ROUGH.

8 x 8, 10 x 10, 10 x 12, 10 x 14, 12 x 12, 12 x 14, 14 x 14, 14 x 16, up to 32	$30 80
10 x 20	32 80
8 x 20	34 30

All Common Cedar $2.00 per M. less than Fir.

FLOORING.

No 2 Red Pine, 4 in	30 50
B. C. Fir	40 00

SHIPLAP.

Pine or Spruce	24 50
8 to 16 ft., 6 in	23 50
B. C. Fir 16 ft., 12 in	22 90
B. C. Fir 16 ft., 6 in	21 90

BOARDS—ROUGH OR S. 1 S.

No. 1 Common Pine, 10 inch	$28 50
" 2 " " "	25 00
" 3 " " "	23 00
" 4 " mixed w dths	21 50
" 5 " "	18 50

SHINGLES.

XXX B. C. aCedar	$3.45
X X B. C. Cedar	2.45
X X X Dimension	.65

LATH.

No. 1 White Pine	$5.00
No. 1 B. C. Fir	4.50

HARDWOODS CAR LOTS, F. O. B. WINNIPEG

White Ash, C/and's, 1" to 2"	$64.00 to	$67.00
Birch, " 1" to 2"	49.00 to	55.00
Basswood " 1" to 1½"	45.00 to	50.00
Rock Elm " 1" to 2"	48.00 to	50.00
Hard Maple " 1" to 4"	47.00 to	55.90
Plain Red and White Oak C/2nds, 1" to 2"	65.00 to	63.00
Quartered Red " " 1" to 2"	74.00 to	79.00
" White " " 1" to 2"	85.00 to	90.00

OTTAWA, ONT.

MANUFACTURERS' PRICES.

Pine, good sidings: 1in. x 7 in. and up	$40 00	44 00
1¼ in. and 1½ in. x 8 in. and up	50 00	56 00
2in. x 7 in. and up	52 00	56 00
No. 2 cuts 2x8" & up	34 00	36 00
Pine good strips 1 in.	35 00	38 00
1¼ in. and 1½ in. 2 in.	36 00 40 00	40 00 45 00
Pine good shorts: 1" x 7" and up	37 00	40 00
1 in.	28 00	30 00
1¼ in. and 1½ in. 2 in.	40 00 42 00	43 00 45 00
7" to "9 A Sidings		17 00
Pine, No. 1 dressing siding	26 00	29 00
Pine, No. 1 dressing strips	26 00	31 00
Pine No. 1 dressing shorts	20 00	25 00
Pine, 10 s. e and better 12' to 16'	27 00	30 00
Pine, 8 s. c. and better 12' to 16'	23 00	26 00
Pine, 7 up s. c. sidings	25 00	28 00
Pine s. c. strips	23 00	26 00
Pine, s.c. shorts	17 00	19 00
Pine, box boards	20 00	23 00

1 x 10 No. 1 barn .. 29 00 32 00
1 x 10 No. 2 " .. 23 00 25 00
1 x 8 & 9 No. 1 barn 23 00 26 00
1 x 8 & 9 No. 2 " 20 00 22 00
Pine Shorts 6' to 11' x 10" 20 00 21 00
Pine mill culls 18 00 20 00
Pine O. culls 12 00 14 00
Spruce, 1" x 4" & up 18 00 20 00
Spruce, 1" stocks, 7, 8, 9 and 10" .. 19 00 21 00
Spruce, 1" clear (fine dressing and B .. 24 00 26 00
Hemlock 14 00 16 00
Basswood 18 00 22 00
Birch 18 00 20 00
Lath, per M
No. 1 white pine 1⅜" 4 00 4 50
No. 2 white pine 3 50 3 75
Spruce, mill run 3 25 3 50
Red Pine, mill run .. 3 00 3 50
Pine Shingles
XXXX, 18 inch 3 25 3 75
Clear Butt, 18 inch .. 2 75 3 25
XX 18 inch 1 70 2 00
White Cedar Shingles
XXXX, 18 inch 4 00 4 50
Clear Butt, 18 inch .. 3 25 3 75
XX, 18 inch 1 85 2 00

WINNIPEG, MAN.

NO. 1 PINE, SPRUCE AND TAMARAC

DIMENSIONS, ROUGH OR S. 1 S. AND 1 E.

	6 ft	8 ft	10 ft	14 x 16 ft
2 x 4	19 00	22 00	24 00	24 00
2 x 6 and 2 x 8	22 50	22 50	24 00	24 00
2 x 10	22 50	23 00	26 00	24 50
2 x 12	23 00	24 00	27 00	26 50

PINE, SPRUCE, TAMARAC AND LARCH

MOUNTAIN STOCK

Dimensions

2 x 4-12	$25 00
2 x 4-8-14-16	25 00
2 x 4-10-18-20	27 00
2 x 6 } 2 x 8 } 8 to 16	25 00

Common Boards

4 inch	$21 00
6 "	23 00
8 "	25 00
10 "	25 00
12 "	25 00

Flooring

4 or 6 inch No. 1	$35 00
" " " 2	33 00
" " " 3	26 00

Shiplap—Finished

4 inch	21 00
6 "	24 00
8, 10, 12 inch	25 00

Siding

6 inch No. 1	35 00
" No. 2	33 00
" No. 3	26 00

Lath

No. 1 Cedar, Pine, Spruce	5 00
No. 2 " " "	3 25

PINE—ROUGH TIMBER

	12 ft.	14 and 16 ft
3 x 6 and 3 x 8	25 00	25 00
3 x 10	26 50	25 50
3 x 12	27 50	27 00
4 x 4 to 6 x 8	25 00	25 00
4 x 10 to 10 x 10	27 00	26 00
8 x 8	25 00	25 00
6 x 14 up to 32 ft		30 80

BRITISH COLUMBIA FIR

DIMENSIONS. S. 1 S. AND E.

2 x 4, 2 x 6, 2 x 8, 8 to 16 ft	$25 00
" " " 18 to 32 ft	27 00
2 x 10, 2 x 12, 8 to 16 ft.	25 50
18, 20, 22 ft.	27 50
24, 26, 28, 30, 32	29 50
2 x 14 up to 32 ft	29 00
3 x 4 to 4 by 12, 8 to 16 ft	27 00
3 x 4 to 4 x 12, 18 to 32 ft	29 00
6 x 6 to 6 x 12 up to 32 ft	29 00
3 x 14, 4 x 14	29 00

BUFFALO AND TONAWANDA, N Y.

WHITE PINE.

(Wholesale selling price.)

Uppers, 1, 1¼, 1½ and 2 in.	$82 00
2½ and 3 in.	90 00
4 in.	95 00
Selects 1 in.	73 00
1¼ to 2 in.	72 00
2½ and 3 in.	85 00
4 in.	90 00
Fine common, 1 in.	57 00
1¼ and 1½ in.	59 00
2 in.	61 00
3 in.	80 00
4 in.	85 00
Cut'g up, No. 1, 1 in.	45 00
1¼ and 1½ in.	54 00
2" No 1 Cuts	58 00
No. 2, 1 in.	28 00
No. 2, 1¼, & 1½ in	43 00
No. 3, 1¼, and 1½	32 00
No. 3 1½" & 2"	35 00
Dressing 1¼ in.	42 00
1¼ x 10 and 12	45 00
1½ in.	40 00
2 in	42 00
Shelving, No. 1, 13 in. and up, 1 in.	45 00
No. 1 Mold st'ps 1 to 2 in	5 00
No. 2 Moulding Strips, 1 to 2 in.	42 00
Barn, No. 1, 12 in.	37 00
6, 8 and 10 in	32 00
No. 2, 10 in.	32 00
No. 2, 12 in.	33 00
No. 3, 10 in.	27 00
No. 3, 12 in.	28 00
Box, 1 x 4	21 00
1 x 6 & up	24 00
1x 10	24 00
1x12	25 00
1x13 and up	26 00
1¼ and 1½ & 2 in.	25 00
Mill Culls, 1	20 00
1¼, 1½ and 2 in	20

BOSTON, MASS.

White Pine Uppers, 1 to 2 inch	$93 00 to $90 00
Selects, 1 to 2 inch	78 00 85 00
Fine Common, 1 inch	58 00 60 00
1¼ to 2 inch	64 00 66 00
No. 1 Cuts, 1 inch	48 00 50 00
1¼ to 2 inch	58 00 60 00
No. 2 Cuts, 1 inch	35 00 37 00
1¼ to 2 inch	48 00 52 00
Barn Boards, No. 1	37 00 47 00
No. 2	35 00 40 00
No. 3	32 00 34 00
Spruce, 10 and 12 in. dimension	24 00
9 in. and under	22 00
10 and 12 in. random lengths, 10 ft. and up	23 50
2x3, 2x4, 2x5, 2x6, 2x7 and 3x4 random lengths, 10 ft. and up	18 00
All other random lengths, 9 in. and under, 10 ft. and up	21 00
5 in. and up merchantable boards, 8 ft. & up, p. 1 s	20 00
Out Spruce boards, p. 1 s	17 00
x2 and 1x3 furring p. 1 s clipped and bundled	21 00 22 00
1½" spruce laths	3 75
1½" " "	3 60

NEW BRUNSWICK CEDAR SHINGLES.

Extras	4 10	4 20
Clears	3 50	3 70
Second clears	2 35	2 50
Clear Whites	2 25	2 35
Extra 18 (Clear whites out)	1 20	1 35
Extra 18 (Clear whites in)		1 60

BRITISH CLUMBIA SHINGLES.

Red Cedar Extras, 16 in. 5 butts to 2 in.	4 50
" Eurekas, 18 in. " "	4 70
" Perfections, 5 butts to 2¼ in	6 00

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WHITE PINE—IN THE RAFT

	cts.	
Square white pine, measured off, 30 to 40 feet average	35	45
First class Ottawa waney, 18 inch average, according to lineal	62	65
" " 19 to 20 inch average " "	65	70

RED PINE—IN THE RAFT.

Measured off, according to average and quality	30	40
Shipping order " " "	35	40

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By the dram, according to average and quality	60	65

ELM.

By the dram, according to average and quality 40 to 45 feet	70	74
" " " " 30 to 35 feet	55	60

ASH.

10 inches and up, according to average and quality	25	30
Average 16 inch	35	45

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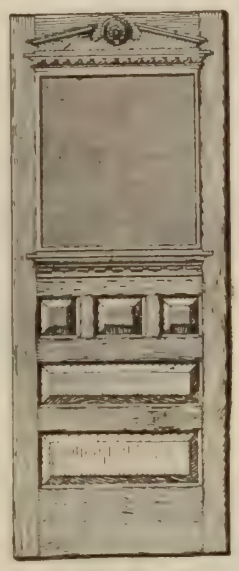

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Johnson's Veterinary Remedies are guaranteed never to fail when used as directed. You get your money back if they ever do.
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A penetrating Alcoholic Liniment. Put up in one gallon jugs, with full directions, per imperial gal. **$4.50**

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Positively the best all-round healing ointment made. In use by the largest owners of horse flesh in Canada. Put up in 2 lb tins, each . . **$2.25** or in ¼ lb tins, per dozen . . **$3.50**

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Put up in bulk, per lb . . . . **30c.**

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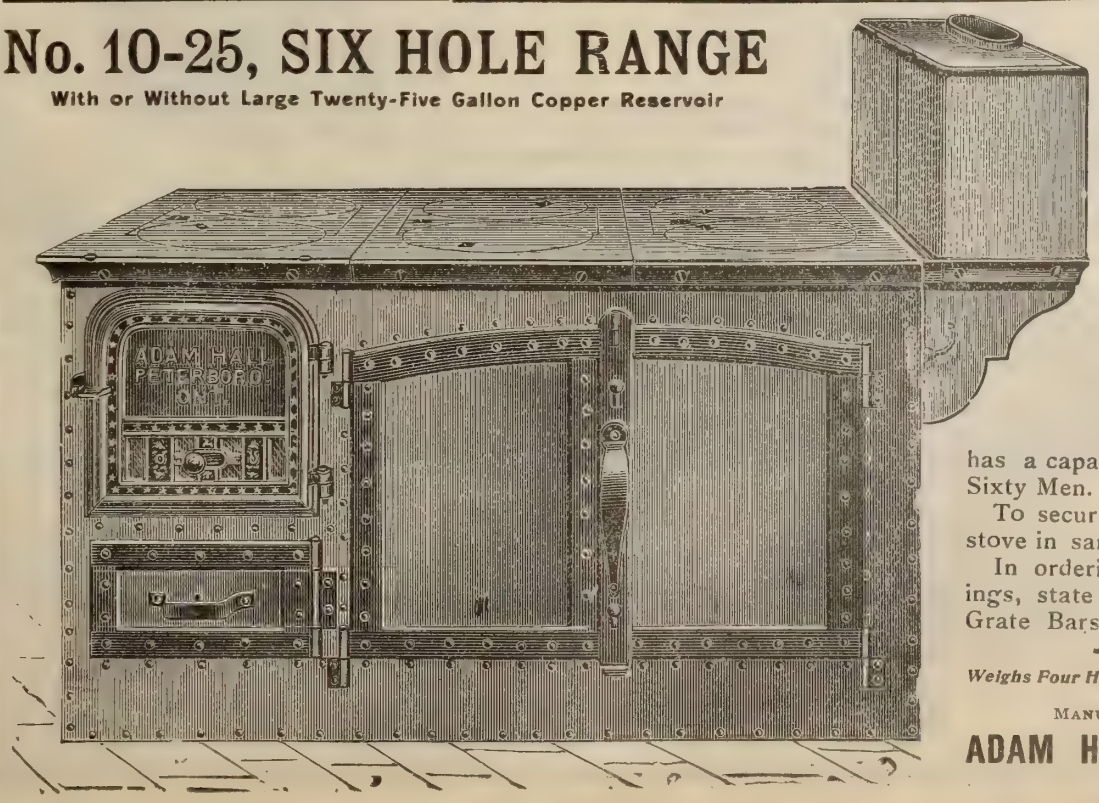
With or Without Large Twenty-Five Gallon Copper Reservoir



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This Range has the large Copper Reservoir and gives the full use of the top for Boiling purposes. It has a capacity to cook for Sixty Men.

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In ordering Fire Box Linings, state if long or short Grate Bars.

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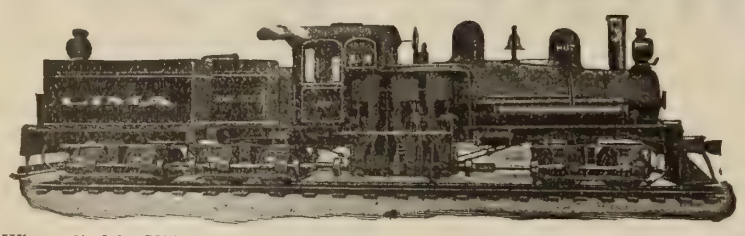
SHAY ROD



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Information cheerfully furnished

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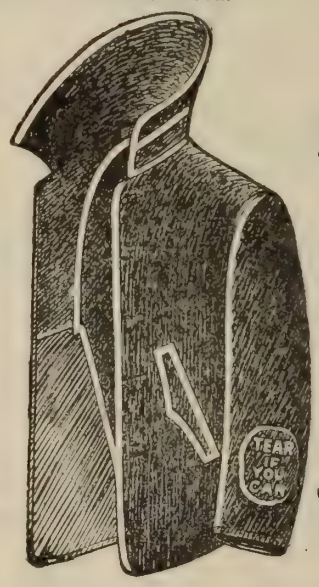

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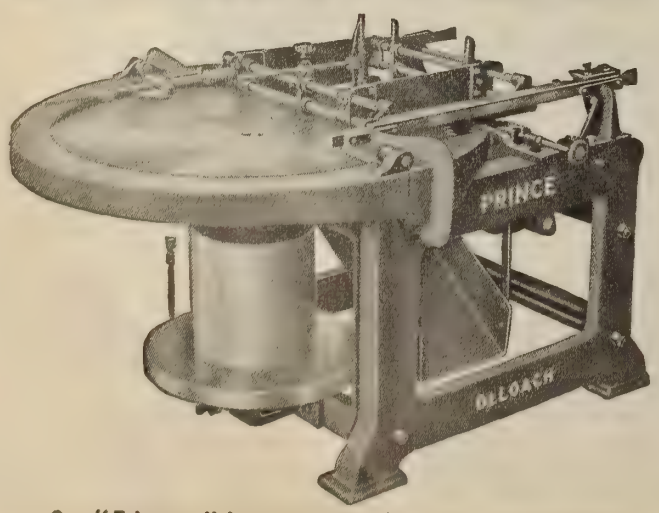

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DeLOACH MILL MFG. CO.
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With best wishes for your success, I am,

Yours very truly,
John H. Crane.

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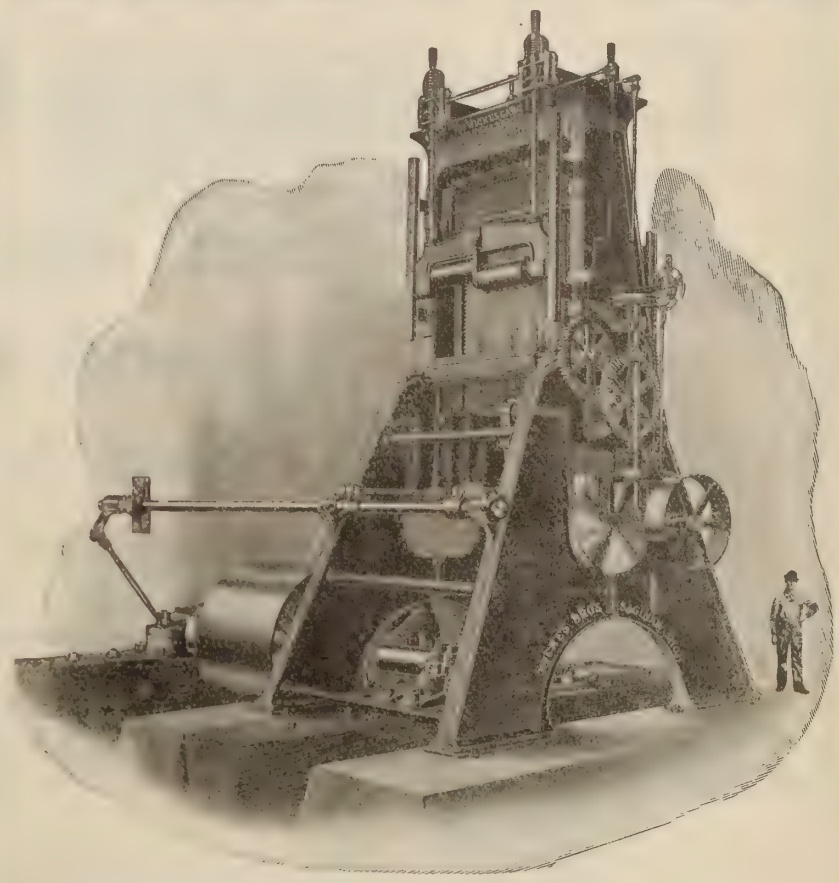

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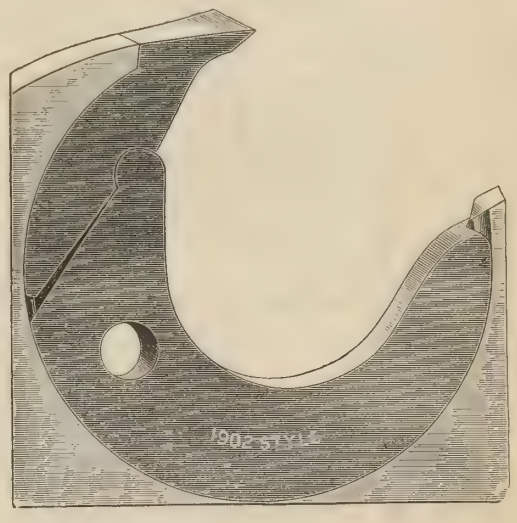

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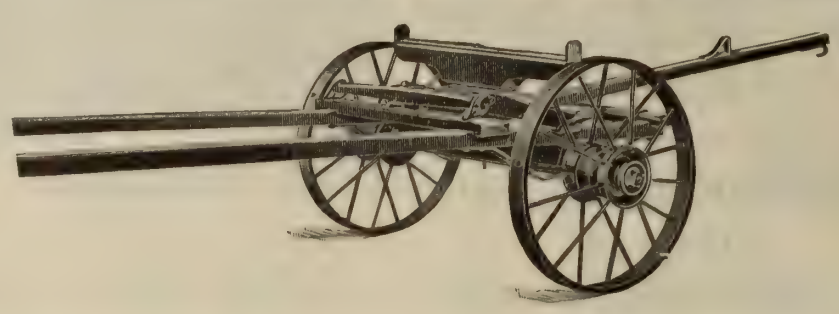

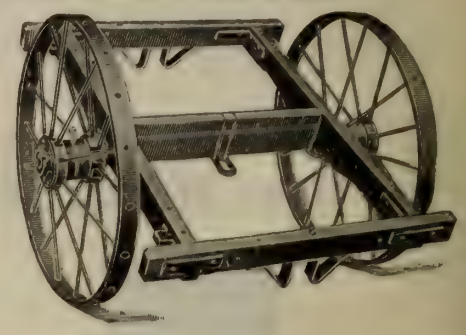

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The Saw Swage With A Name

See that this Name is on your Swage.

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This Name on the Swage is your Guarantee.

Simple in Construction. Easy to Adjust. Strong and Durable.

The Hanchett Adjustable Swage will swage any size or gauge of

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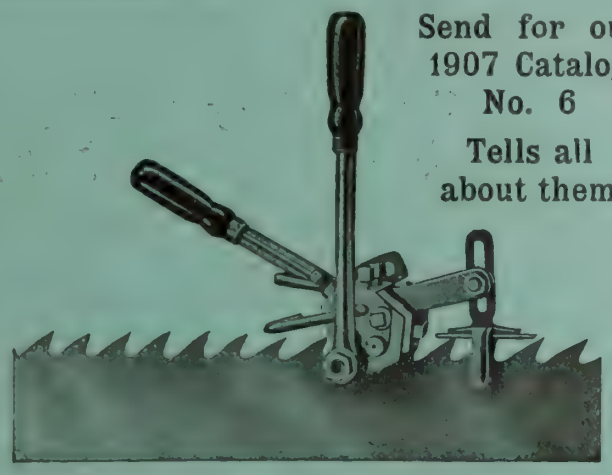
Every Swage manufactured by the Hanchett Swage Works is thoroughly tested and Positively Guaranteed to give Satisfaction.

Swage your Saws with the Hanchett Adjustable Swage ; it will lengthen the life of the Saw, and enable you to make better lumber and more of it.

HANCHETT CIRCULAR SWAGE WITH BENCH ATTACHMENT AND JOINTER (STYLE D).

We also manufacture Complete Filing Room Equipment



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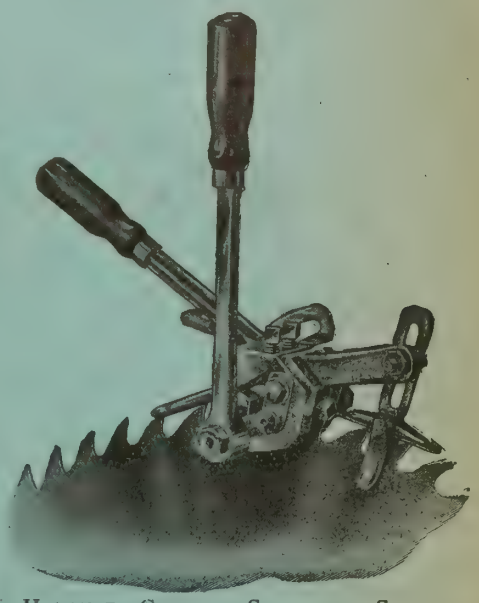
Send for our 1907 Catalog No. 6 Tells all about them



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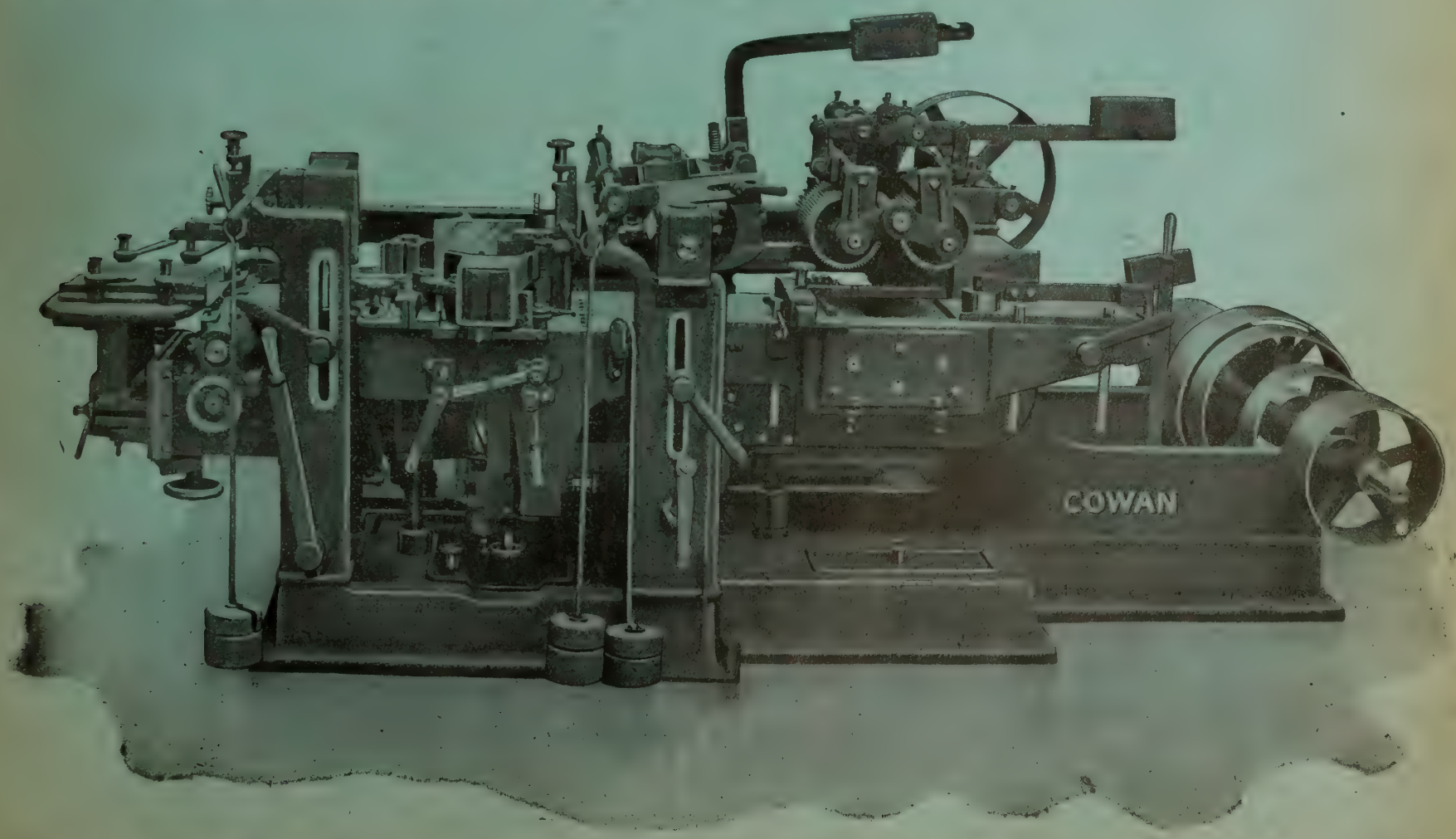

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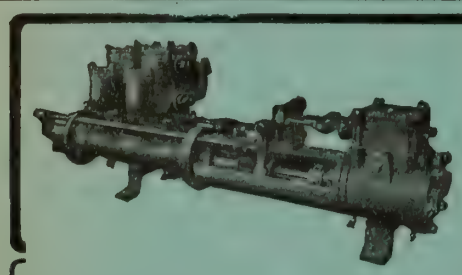

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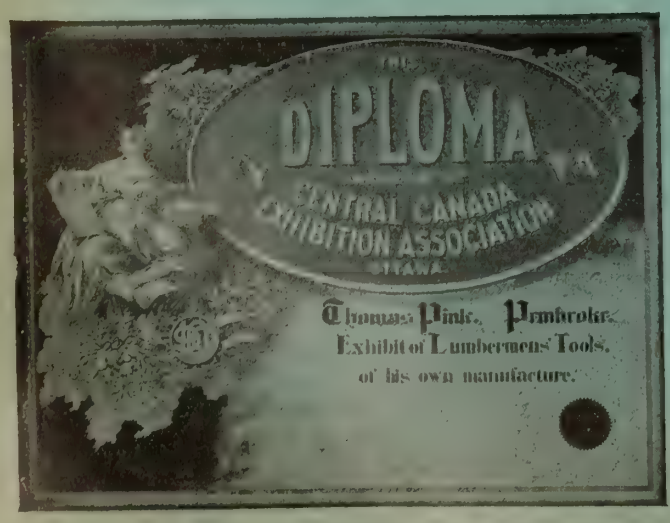

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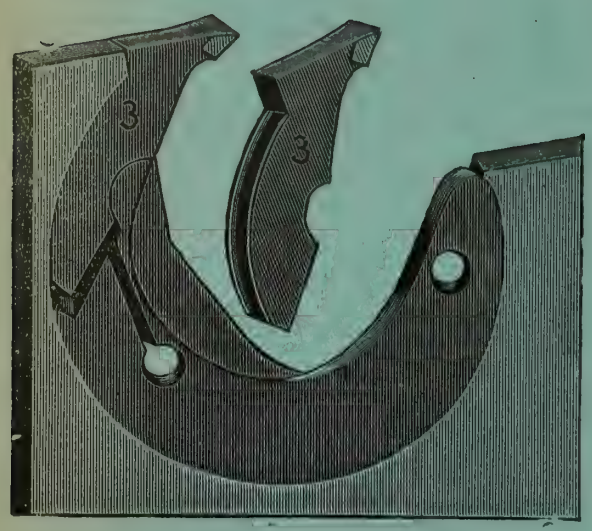

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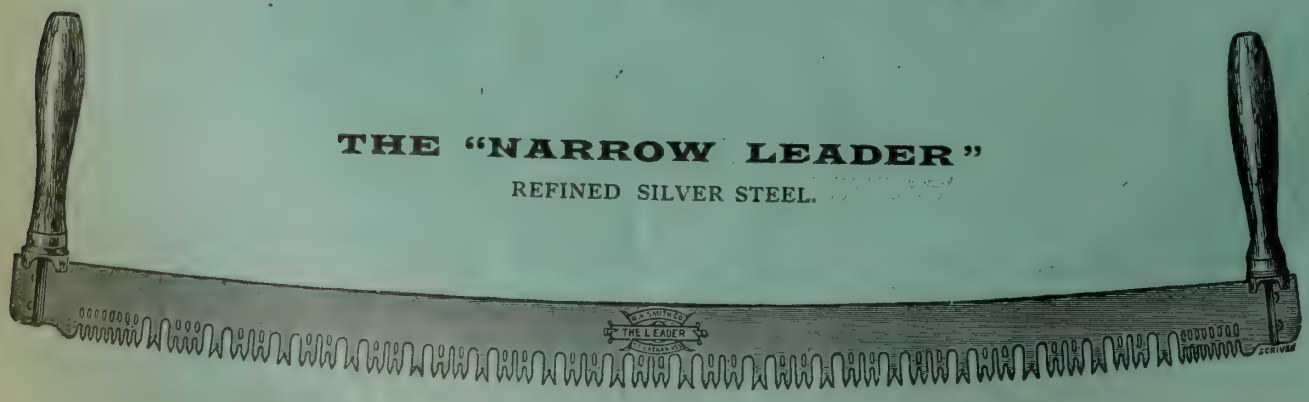

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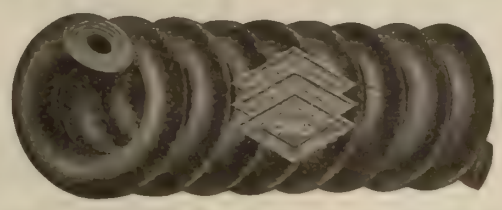

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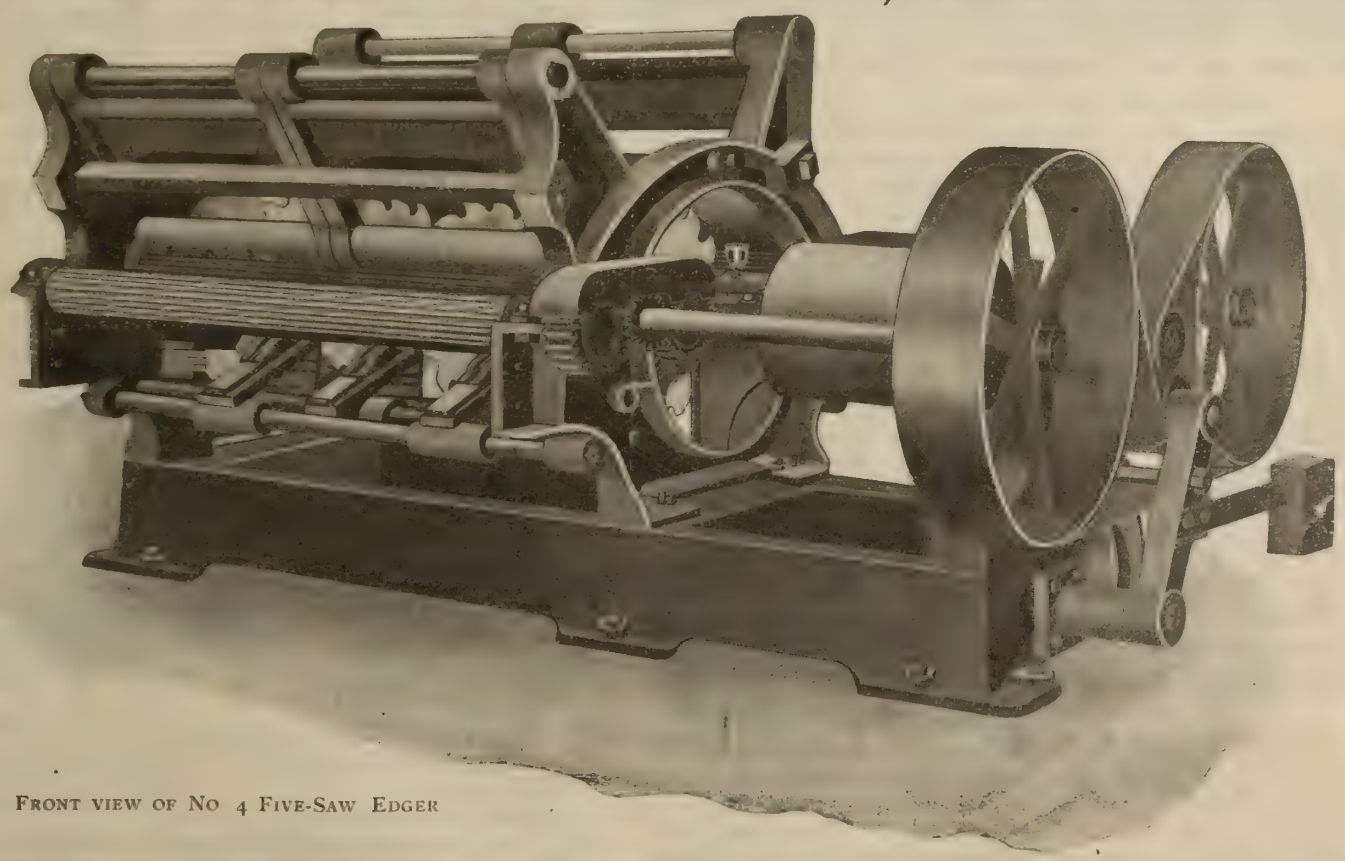

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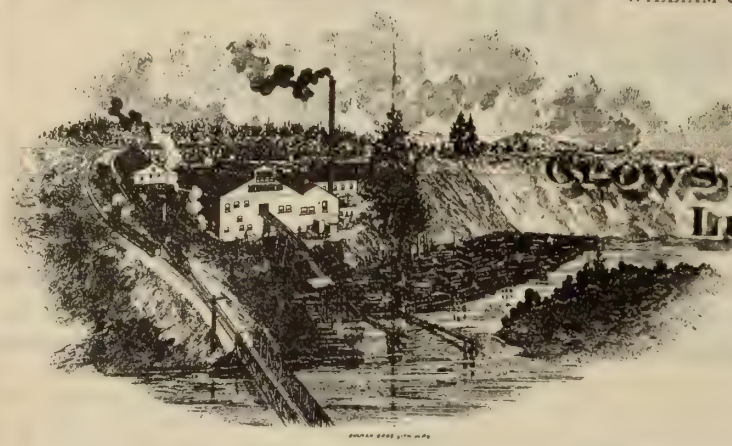

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REVELSTOKE, B.C.
COMAPLIX, B.C.

The North Star Lumber Company

MANUFACTURERS OF

Pine, Fir and Larch Lumber and Finishing

RESAWN BOARDS A SPECIALTY.

Elko, B. C.

The Fernie Lumber Co., Limited

Fernie, B. C.

MANUFACTURERS OF AND DEALERS IN ALL KINDS OF

FIR, CEDAR, SPRUCE and LARCH

ROUGH AND DRESSED LUMBER

DIMENSION AND BRIDGE TIMBER A SPECIALTY.

CEDAR TELEGRAPH AND TELEPHONE POLES.
We have a special stock on hand for immediate shipment.

Porto Rico Lumber Co., Ltd.

MANUFACTURERS OF

LUMBER, LATH and SHINGLES
CEDAR - SPRUCE - LARCH

MILLS AT MOYIE and NELSON HEAD OFFICE: BOX 205 NELSON, B. C.

Manufacturers of

Larch, Spruce Cedar and Fir

Lumber

Yearly cut—30,000,000 feet.

Large stocks of well seasoned lumber always on hand

Head Office: **FERNIE, B. C.**

Eastern Office: Union Bank Building. **WINNIPEG, MAN.**

THE NORTH AMERICAN LAND & LUMBER CO., LTD.

MANUFACTURERS OF

CEDAR, FIR, SPRUCE,
LARCH and WHITE PINE

LUMBER

Lath, Cedar Shingles

DRAWER 16 FERNIE B. C.

FIR, CEDAR and SPRUCE

TIMBER

THE
NORTH BRITISH COLUMBIA EXPLORATION CO., Limited

own and control extensive Timber Limits throughout British Columbia.

R. C. MACDONALD, President, WINNIPEG, MAN.

H. P. SIMPSON, Secy-Treas., VICTORIA, B. C.

OFFICES:
Victoria
Vancouver
Winnipeg

SPRUCE LUMBER

that is superior in grade, right in price, and shipments made, either straight or mixed carloads, with utmost dispatch. Try us on your rush orders. . . . . .

—o—

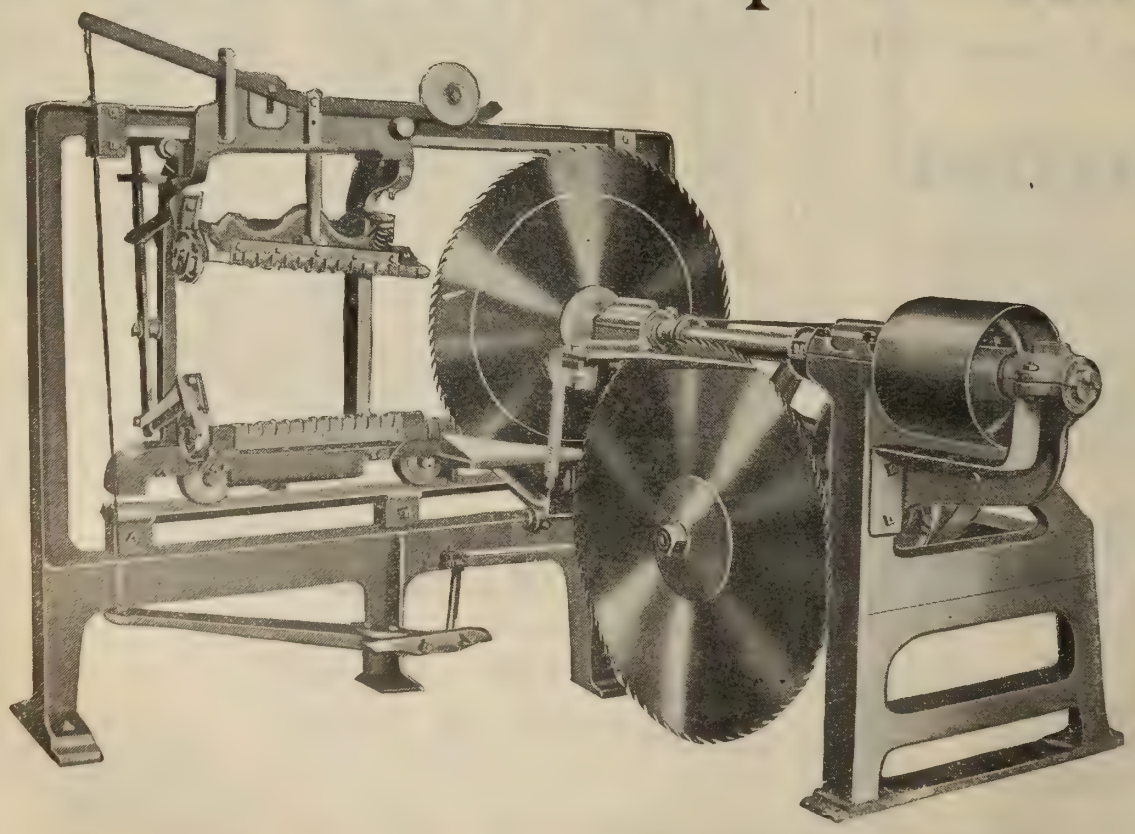
RED DEER LUMBER CO.

BARROWS, - SASK.

Telegraphic orders should be sent to ELKGATE JCT., MAN.
Via C. N. R.

SALES OFFICE: 304 UNION BANK BUILDING, WINNIPEG.

Iron Frame "Simplex" Shingle Machine



IN this, our latest design of Shingle Machine, we have incorporated all the advantages contained in our wood frame "Simplex" and added several improvements.

The arbor has been made heavier and a third bearing added to support it outside the driving pulley. The method of putting lead in the saw arbor has been greatly improved. This is now done by swinging on a centre directly under the saw the whole frame which carries the arbor. Thus the alignment of the bearings is not in any way affected and there will be no danger of hot bearings after the lead has been changed. The change may be made while the machine is running and without stopping the carriage.

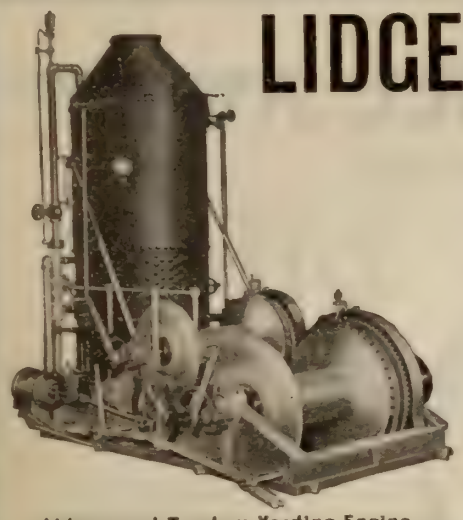
An improvement has also been made in the method of driving the edger. It is belted direct from a shaft running at right angles to the main arbor from which it is driven by means of a bevel friction. This m kes a very neat compact drive and has proved satisfactory in the mill.

The rail on which the carriage travels is made of square steel and when worn can be renewed by simply turning npside down.

Over three hundred of our Upright Machines (wood and iron frames) are in use in British Columbia and Washington.

MANUFACTURED ONLY BY

Letson & Burpee, Limited, Vancouver, B. C.



Lidgerwood Tandem Yarding Engine.

LIDGERWOOD LOGGING ENGINES

(Important Features covered by Patents)

These cuts show two of our latest improved types for

PACIFIC COAST LOGGING

NOTE THEIR FEATURES

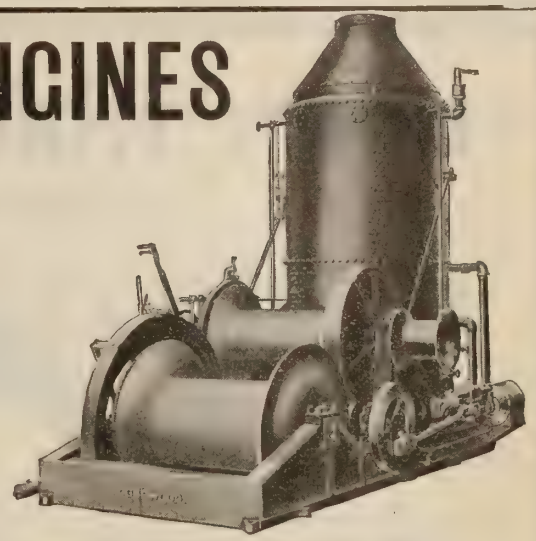
For Further Particulars Address

LIDGERWOOD MFG. CO.

96 Liberty Street, NEW YORK, N. Y.

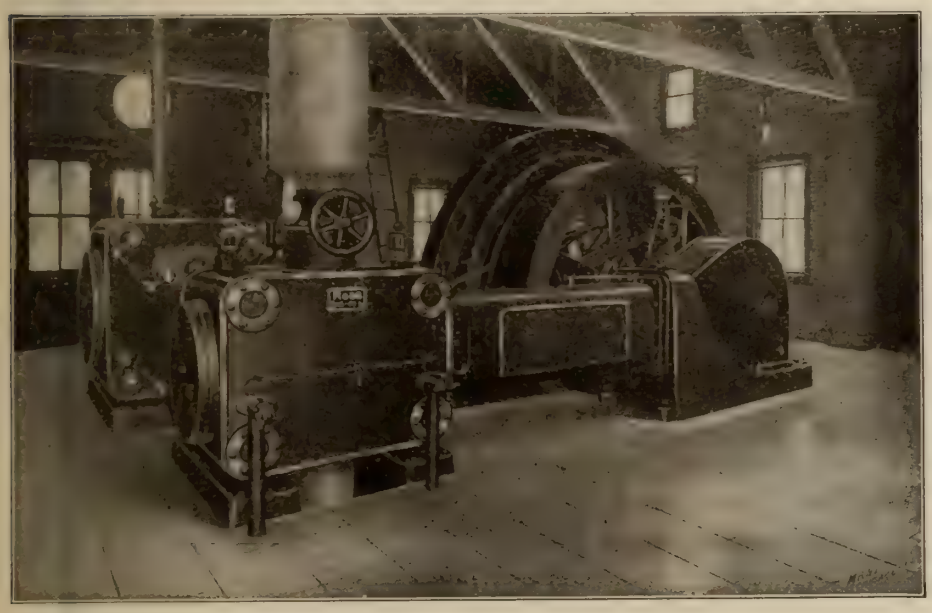
OR

Alaska Building - SEATTLE, WASH.



Lidgerwood C-D Type Road Engine.

Robb Power Plants

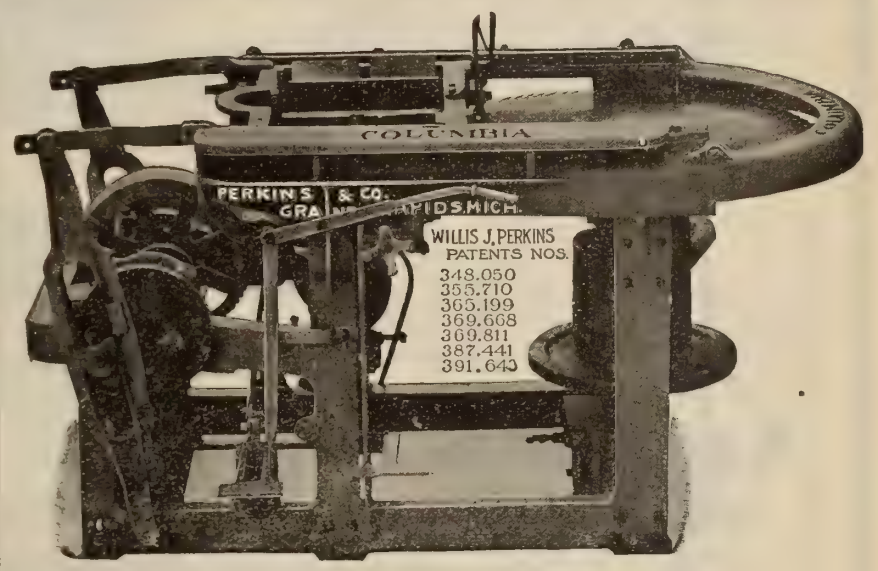


Robb-Armstrong Cross Compound Corliss Engine at Electric Station, Town of Owen Sound, Ont.

ROBB ENGINEERING CO., Ltd.

AMHERST, N.S.

DISTRICT OFFICES { 320 Ossington Avenue, Toronto, WILLIAM McKAY, Manager,
Bell Telephone Building, Montreal. WATSON JACK, Manager,
355 Carlton Street, Winnipeg, J. F. PORTER, Manager.



The Final Test of a

Shingle Machine

Is the complete record of its actual day after day performance. That's the kind of test that has given this machine its reputation of being the best shingle producer on the market.

Day in and day out, year after year.

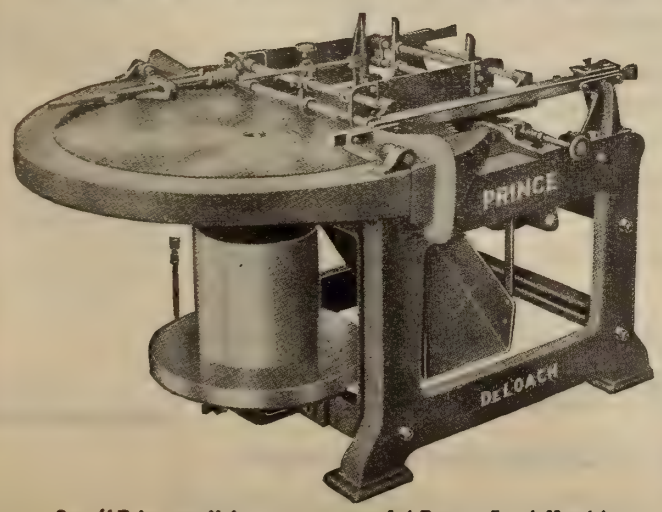
The Columbia

Goes on producing more and better shingles from a given amount of stock than any similar machine can produce. Its immense capacity, ease and economy of operation is putting it into nearly every mill in the country. You ought to know more about it. Write us.

Perkins & Co.

GRAND RAPIDS, **MICHIGAN.**

DeLOACH "PRINCE" HAND FEED SHINGLE MILL



Our "Princess" is a very powerful Power Feed Machine.

JOHN H. CRANE,
MANUFACTURER OF
LUMBER AND SHINGLES,
MONTEREY, ALA., JULY 2, 1907.

DeLOACH MILL MFG. CO.
BRIDGEPORT, ALA.

Gentlemen. I purchased from you in 1905 a "Prince" hand feed shingle machine. I have operated it and find it all you claim for it. We cut at the rate of 30,000 shingles in 10 hours and made first class shingles. I consider your machine a very light running machine. If I wanted another hand machine I would certainly buy a DeLoach Prince.

With best wishes for your success, I am,

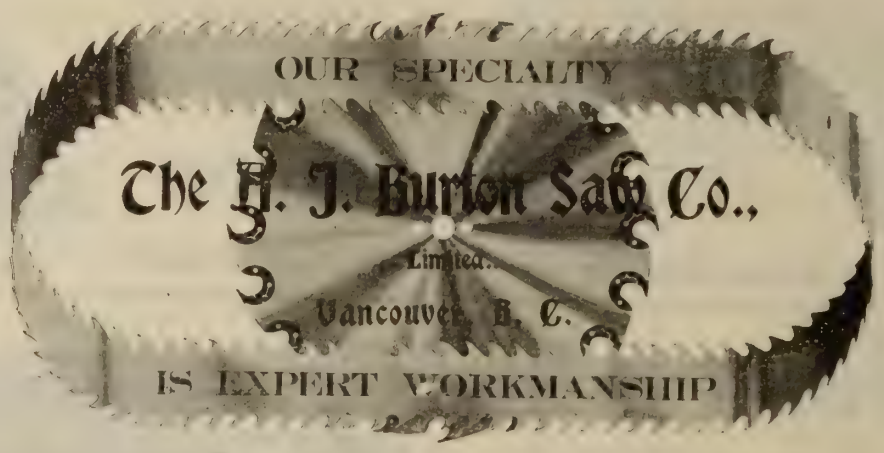
Yours very truly,
John H. Crane.

Send for Catalogue of Engines, Boilers, Gasoline Engines, Saw Mills, Shingle Mills, Planers, Gang Edgers, Lath Mills, Grinding Mills, Water Wheels, Etc. Complete Circular and Band Mill Equipment.

DeLOACH MILL MFG. CO, BOX 511, BRIDGEPORT, ALA

DON'T THROW A DOLLAR BILL AWAY

UNLESS YOU KNOW IT IS A COUNTERFEIT



WE HAVE WON THE BATTLE

OUR SAWS HAVE FOUGHT THEIR WAY TO THE FRONT

BURTON'S SAWS

ARE POSITIVELY THE BEST

WHY?

BECAUSE they are now tempered by an entirely new process, where the heat is registered by an electric pyrometer while the saw is clamped under many tons hydraulic pressure in a revolving furnace, which absolutely guarantees uniformity and toughness.

This electric test is an entirely new process in connection with tempering saws (being used only by us) and assures every part of the saw being tempered alike; while this method of treating the steel gives it a greater toughness than any other known method, which enables us to make the above assertion.

We are prepared to place our saws in any reliable mill, in competition with any other saw on the market, and any millman or filer who will give his honest and unprejudiced opinion will soon find our saws possess a greater toughness than found in any other make.

DO NOT DOUBT THIS STATEMENT

as we are here to demonstrate it, and we invite you to bring to our works a saw of any other make, when we will be pleased to prove the above facts before you, under actual test. INSIST ON HAVING OUR SAWS.

We Have, During the Present Month, Secured

One of the Largest Orders for Saws Ever Placed

by a New Westminster firm, being that of the Brunette Saw Mills Co., Limited, for the entire equipment of their new Shingle Mill at Sapperton, B.C. The order includes :—

Twelve 40-inch Shingle Saws;
Nine 38-inch Jointer Saws;
Two 14-inch by 9-feet Drag Saws;
One 60-inch Inserted Tooth Saw;
One 54-inch Inserted Tooth Saw;
Five Hundred Saw Teeth;
Twenty-four Holders;
One Solid Steel Anvil;
One Latest Improved Hanchett Automatic Sharpener.

BURTON'S ELECTRIC TEMPERED SAWS

Are The Best

Burton's Saws Are The Best

Our Customers Say So

Solid Saw Satisfaction

Averages over 60,000 per Day with Burton's Saws.

The A. J. Burton Saw Co.,
Vancouver, B.C.

Dear Sirs:—It may be a satisfaction for you to know that our double cut band at Cascade has made an average of over sixty thousand per day, and that we have worn your saws to eight and one-half inches and still getting these good results.

Yours respectfully,
THE YALE-COLUMBIA LUMBER CO.,
November 4th, 1907. Nelson, B.C.

Three Years' Entire Satisfaction with Burton's Saws.

Gentlemen:—We are pleased to advise that we have been using your solid and inserted tooth saws for the past three years alongside saws of other makes. Your saws have always given us entire satisfaction, and we find them equal to saws of the older established makes.

Yours truly,
ADOLPH LUMBER CO.,
November 20th, 1907. Baynes Lake, B.C.

No Hammering Required with Burton's Saws.

Messrs. The A. J. Burton Saw Co.,
Vancouver, B.C.,

Dear Sirs:—I am using several of your saws and in both the shingle and saw mill they give perfect satisfaction. The inserted tooth saw which I purchased from you a short time ago was the first one of its kind which in the experience of our foreman did good work without first being hammered

Yours truly,
NANAIMO SAWMILL,
A. Haslam, Mgr.,
Nanaimo, B.C.

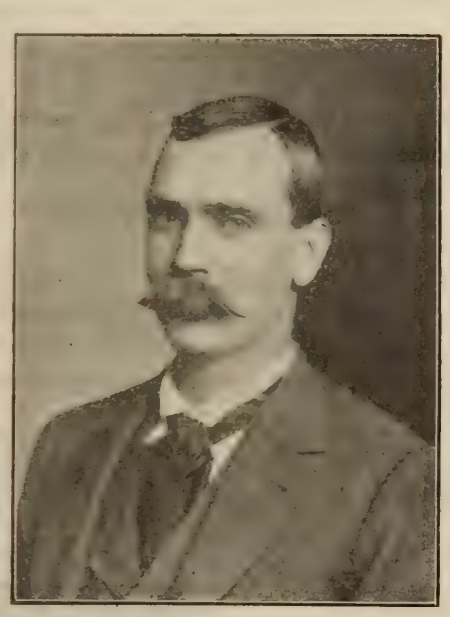
Perfect Satisfaction—Glad to Recommend them.

The A. J. Burton Saw Co.,
Vancouver, B.C.

Dears Sirs:—We have pleasure in saying that the saws, teeth, etc,, which you have supplied us with during the past two years have given us perfect satisfaction and we shall be glad at any time to recommend your goods.

We have always found you prompt in shipment and in attending to any orders sent you.

Yours truly,
D. R. FRASER & CO., LTD.,
January 23rd, 1907 Edmonton, Alta.



A. J. BURTON,
General Manager of the A. J. Burton Saw Company, Limited, Vancouver, B.C.

"All Giving Satisfaction."

Manager The A. J. Burton Saw Co,
Vancouver, B.C.

Dear Sir:—We wish to compliment you on the 65 saws we purchased from your Company. They comprise practically all kinds, from a lath saw to a 64-inch inserted tooth and they are all giving excellent satisfaction equal to any of the saws furnished us in the past by any of the old established makes.

Wishing you every success, and believing that you deserve it, we are,

Yours truly,
THE CANADIAN PACIFIC LUMBER CO., LTD.,
(Signed) Per P. D. Roe,
Managing Director.

Does as Much Work with Less Steam.

The A. J. Burton Saw Co.,
Vancouver, B.C.

Gentlemen:—I have now had the 60-inch inserted tooth saw received from your Company at work for six days. I am thoroughly satisfied with it.

I am doing as much work with your saw, which has 22 teeth, with 80 lbs. steam, as I did with my former saw, which had 36 teeth, at 100 lbs. steam

I would highly recommend your Hoe pattern 22-tooth saw to any one for B.C. timber, especially when the power is limited.

Yours truly,
W. McDONALD,
Langley Prairie, B.C.

Note you may make any use you see fit of this letter.

Wants Burton's Saws.

Messrs. The A. J. Burton Saw Co.,
Vancouver, B.C.

Dear Sirs:—We have been using your saws all this season along with Simonds and Atkins and find they have proven as good as the others.

You can furnish us with saws as long as you continue to turn out the goods you do at present.

We are installing a band and re-saw this winter and hope to see Mr. Burton when he comes this way.

Yours truly,
BOWMAN LUMBER CO.,
November 16th, 1907. Comaplix, B C.

Equal—If Not Better.

Vancouver, November 28th, 1907.

The A. J. Burton Saw Co.,
Vancouver, B.C.

Dear Sirs:—It may interest you to know that the Vancouver branch of the Rat Portage Lumber Company has used your saws for the last three years and we have no hesitation in recommending your band saws; they are equal to, if not better than, any make on the market. Your circular saws that we have used have had to compete with 4 other makes and have held their own satisfactorily.

Yours truly,
MANAGER, THE RAT PORTAGE LUMBER CO., LTD.
Vancouver, B.C.

Using Burton's Saws Exclusively Now.

Vancouver, November 28th, 1907.

The A. J. Burton Saw Co.,
Vancouver, B.C.

Gentlemen:—In answering your inquiry it affords us a great deal of pleasure to be able to say that it is only with the utmost pride and satisfaction that we are able to point to the Burton saws. We have tried nine different makes of shingle saws in the past six years, and we find yours compare very favorably with the older makes; while for our gang cut-off in our No. 2 Mill, where we are using two batteries of four and one of three, of your 56-inch, which is a very hard place on saws, we are, as you know, using your saws exclusively.

Our confidence in the Burton saw is further shown by the fact that, without solicitation, four of your 14-inch band saws and two 8-inch band re-saws make up part of the equipment of our new lumber mill, which we expect to start in a few days.

Yours very truly,
E. H. NEWTON,
SUPT. THE HASTINGS SHINGLE MANUFACTURING COMPANY, LTD.
Vancouver, B C.

"Given Good Satisfaction."

Messrs. The A. J. Burton Saw Co.,
Vancouver, B.C.

Gentlemen:—We have lately been using some of your saws and they have given us good satisfaction, and we are very much pleased that this should be the case, as we would sooner do business with a Canadian firm.

To any sawmill requiring saws we have no hesitation in recommending the article turned out by your firm.

Yours truly,
KAMLOOPS LUMBER CO., LTD.,
March 31st, 1905. Kamloops, B.C.

Entirely Satisfactory.

The A. J. Burton Saw Co.,
Vancouver, B.C.

Dear Sirs:—We take pleasure in stating that we have used your chisel bit saws since September 1904 and have always found them entirely satisfactory.

Yours very truly,
THE B. C. MILLS, TIMBER & TRADING COMPANY,
November 27th, 1907. Vancouver, B.C.

Cuts Iron Like Wood.

Manager The A. J. Burton Saw Co.,
Vancouver, B.C.,

Dear Sir:—We are sending you by express to-day a 1-inch bolt cut in two by one of your slab slashers. The saw had to be filed after making the cut, but suffered no further damage.

Yours truly,
THE CANADIAN PACIFIC LUMBER CO., LTD.
May 12th, 1905.

The A. J. BURTON SAW COMPANY, Limited

VANCOUVER, B.C.

Will you have any saws needing repairs during the coming winter?

FOR many mills the season is ended. What will the next one be? Forewarned is forearmed. Why not look over all your saws now and get your order in early for saws you will need next spring. Likewise, and saws needing repairs should be forwarded to us now so that there will be sufficient time for careful attention to everything about them before they are again wanted for service. Those who attend to repairs and ordering new saws now for spring delivery are ready to start without annoying delays when next season opens. Having saw work done during the winter months will prove agreeable to both saw manufacturer and saw user.

SIMONDS CANADA SAW COMPANY
LIMITED

TORONTO, ONT. **MONTREAL, QUE.** ST. OHN, N.B.

TEON BELTING

STEAM PROOF
WATER „
HEAT „
OIL „
ACID „
Stronger and Cheaper than Leather.

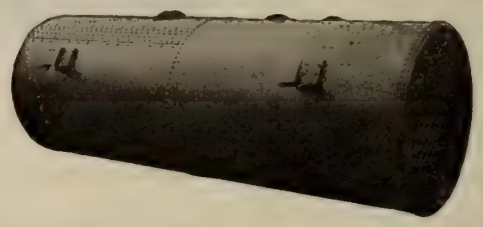
LEATHER BELTING **CAMELS HAIR BELTING**
CAPATA BELTING [BALATA TYPE] **LACE LEATHER, ETC.**

Special Arrangements for Trial Belts.
Write for Price Lists and Discounts.

P. H. WILBY, 27½ Front Street East, **TORONTO**
Phone Main 1930. SOLE AGENT FOR CANADA.

THE JOHN McDOUGALL CALEDONIAN IRON WORKS COMPANY, LIMITED

Head Office and Works: MONTREAL



BOILERS: Return, Tubular, "McDougall" Water Tubes Locomotive, etc.

TANKS: Water Tanks, Penstocks Steel Rivetted Pipe.

MACHINERY: Complete Power Plant, designed and installed.

Sole Manufacturers in Canada of "Worthington" Turbine Pumps and "Doble" Impulse Water Wheels.

DISTRICT OFFICES:

MONTREAL, 82 Sovereign Bank Building
TORONTO, 810 Traders Bank Building
WINNIPEG, 251 Notre Dame Avenue
VANCOUVER, 416 Seymour Street
NELSON, Josephine Street
NEW GLASGOW, N.S., Telephone Building

OATS

WE make a specialty of shipping oats to lumbermen, delivered at any point in the Dominion, in bulk or sack.

We use the best sacks that can be bought. We have the best facilities for giving prompt shipment.

Be sure you wire or write us before you buy. The quality of Oats we ship is known all over the Dominion.

The Northern Elevator Co., Limited

Winnipeg, Man. Canada

N. BAWLF, President.
G. R. CROWE, Vice-President.
S. P. CLARK, Secretary.
W. R. BAWLF, Treasurer.

CANADA LUMBERMAN
AND WOOD-WORKER

PUBLISHED THE 1ST AND 15TH OF EVERY MONTH
BY

HUGH C. MACLEAN, LIMITED,
TORONTO, CANADA

HEAD OFFICE - - Confederation Life Building, TORONTO
Telephone Main 2362.

MONTREAL - - Telephone Main 2299. B34 Board of Trade
D. BURNSIDE, Representative

WINNIPEG - - - - - Telephone 224. 330 Smith Street
ROLAND F. HILL, Representative

VANCOUVER - - - Telephone 2248. 615 Hastings Street
GEO. A. GALL, Representative

TERMS OF SUBSCRIPTION:

Canada, United States and Great Britain, $2.00 per Year, in advance; other foreign countries embraced in the General Postal Union, $3.00.

THE CANADA LUMBERMAN AND WOOD-WORKER is published in the interest of and reaches regularly persons engaged in the lumber, wood-working and allied industries in Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN AND WOOD-WORKER is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "WANTED" and "FOR SALE" advertisements.

TORONTO — DECEMBER 15, 1907 — MONTREAL

A PROMISING ORGANIZATION.

Under the name of the "British Columbia Timber and Forestry Chamber of Commerce" those engaged in the lumber industry on the Pacific coast have organized for mutual benefit and protection. All persons, firms and corporations, in any way financially interested in timber or timber lands within the Province of British Columbia, are admissible. According to the by-laws, the purpose of the organization is to consider ways and means for the protection and preservation of the forest resources of the province (especially against fire), and to suggest the enactment of legislation conducive to this end. Branch chambers are also to be organized in different parts of the province, to act in conjunction with the main body.

The idea is highly commendable and well worth serious consideration by lumbermen in all parts of Canada. Already in some of the Southern States there is a movement afoot among the lumber dealers and saw mill men to establish exchanges in the timber states to facilitate the handling of the output. These exchanges would be presumably modeled after the same plan as the builders' exchanges in our large cities. There builders gather together at will for the discussion of questions of mutual interest, with the result that there exists among them a common understanding with regard to current trade conditions. Among lumbermen no such organizations exist, although it is generally admitted by them that increased confidence in one another and the wider dissemination of trade knowledge might do much to place the lumber industry on a more satisfactory footing.

In the past it has been found that many of the smaller mills cannot keep up with price fluctuations, and, in ignorance of market conditions, oftentimes undersell one another. This, however, is but a minor consideration. A few weeks ago two or three Toronto dealers appeared in their private capacity before the Railway Commission in that city and voiced grievances which were by no means theirs alone. While it was not doubted for a moment that unjust switching charges have been levied on lumbermen for some time past, weight would have been added to the cause of the plaintiffs had their charges been backed by an organization such as that recently formed in British Columbia. Complaint after complaint may be filed with the railroads and railroad companies, but can be of little avail until some concerted action is taken by the lumbermen of the various provinces to press for their rights.

A case in point was the difficulty experienced during the past spring and summer in securing cars. This a determined lumbermen's organization might have overcome, or at least have improved so far as Ontario was concerned. Then, too, in such a time of financial stringency as the present, the possibility of the smaller men becoming embarrassed and causing a drop in the price of lumber is not altogether remote, but could easily be made so if an organization, fully cognizant of the state of the market, could make its influence felt and prevent a display of weakness. Many of the smaller mills have insufficient capital to stand even a short season of hard times. So long as building operations are active, and they can turn over money enough to pay for labor, running expenses and material with some degree of ease, all goes well, but if they cannot sell promptly they become embarrassed and to save themselves sell at the best price offering. This is precarious for the trade as a whole, fosters distrust and possibly creates a slump in the market. The example of the British Columbia trade ought to prove exceedingly valuable just now, when lumbermen all over the country are more or less dependent on one another for the maintenance of a sound market.

THE EFFECT OF AN EXPORT DUTY ON PULPWOOD.

President Roosevelt has come to the conclusion that Canadian pulpwood should be allowed to go duty free from this country to the United States, by reason of which concession wood pulp would be allowed to return free of duty. This solution of the pulpwood question is not marked by any particular spirit of generosity, nevertheless, it is considered unnecessary by some American manufacturers who reason thus: If Canada will continue to furnish us with all the wood we need free of duty why should we not be satisfied with the tariff as it is? American pulp and paper manufacturers say that they cannot afford to buy wood in Canada at present prices, plus the enormous cost of transportation to their mills, and produce pulp in competition with Canadian mills without tariff protection. As stated by Senator N. M. Jones, manager of the Lathadin Pulp & Paper Company, Lincoln, Me., "the freight alone is a considerable item in connection with the manufacture of sulphite. The amount of wood required to produce two thousand pounds of sulphite is at least two cords of rough wood, which will weigh nine thousand pounds, hence freight is paid on seven thousand pounds of waste material, and without the protective duty mills using Canadian wood could not compete. Should Canada prohibit the exportation of pulpwood, we might be compelled to admit pulp and paper free of duty in order to protect the mills in this country dependent on Canadian wood."

This fear of Senator Jones' is well founded. Those who in this country are advocating for legislation to lessen the exportation of forest products in the unmanufactured state see clearly that the time has come when the paper manufacturing industry of this country must receive the attention it merits. At present the output of paper in the Dominion is in the neighborhood of 300 tons per day, but there is no doubt that this ouput could be doubled in the near future to meet the demands of foreign trade.

THE GOVERNMENT AND THE WATER POWERS.

Whilst no one can deny the right of the Government to take private property for public purposes under proper needs and conditions, it is a questionable whether any such wholesale provision for the exercise of such a right has heretofore been made as that provided in the Power Commission Act passed by the Ontario Legislature last session. Under this Act the Commission may, with or without the consent of the owner, enter and take any water power capable of being used for the production of electrical energy, no matter what the purpose for which the owner of such power is using it or intends to use it in the future.

Take for example the position of the lumbermen, most of whom are dependent upon water powers which they own for the sawing and preparation of their lumber for market. They have acquired large areas of timber, representing the investment of many millions, upon the strength of calculations based upon the utilization of water powers which they

have acquired. The Commission can expropriate these water powers and thus defeat the calculations upon which the investments were made. So with all other manufacturers, millers, and persons whose businesses are operated by water powers. Any such powers from which energy can be produced may be taken and all business calculations depending upon them upset. The wisdom of having the bigger industries and larger interests of the country thus placed at the mercy of politicians, merely to serve the smaller and at best local interests, is more than questionable.

UNWARRANTED CANCELLATION OF ORDERS FOR LUMBER.

A few months ago, says the "American Lumberman," many buyers were making vigorous complaints because of the failure or refusal of concerns to ship stocks ordered. In many cases the correspondence showed that the orders had been placed for six to eight months. Such complaints were more numerous in regard to the red cedar shingle trade, than any other branch of the business, and it was alleged that failure to furnish the shingles was due, in most cases, to appreciation in the value of the stocks. In other words, it was stated broadly, that in the event of making a bad sale, which would entail a loss, the manufacturers or wholesale dealer neglected or refused to ship the stock he had contracted to deliver.

A great many buyers held up their hands in horror at such heinous action on the part of the other fellow. They could not understand, why, any reputable business house would violate trade ethics in this astounding manner. Ugh! the utter depravity of certain concerns heretofore regarded as above reproach.

A few months ago buyers were protesting because the other fellow failed to ship the goods ordered. Now they are protesting if he does and beseeching him to don't. Witness this exposition of the situation as framed by a western operator:—

"We believe our customers are as carefully selected as those of any wholesale concern can be, and still, we have had a number of instances in which retail dealers notified us that they would not accept cars, which we had shipped upon their orders. In every case, these orders were in good standing when shipped, and in a number of the cases involved the cars were in transit, when bought and reconsigned to the customers. We understand from various friends in the trade, that this is the experience of a great many wholesalers in this district. Whether anything of this kind is attempted with shippers in other districts which are closer to their markets, we do not know. It may be that lumber dealers feel we are so far away that we will have to put up with whatever they see fit to do, or it may be they feel that stock is so long in coming from the coast that such a cancellation will be no real inconvenience to use.

"We believe that the trade papers should be emphatic in their comments upon this subject and make the wholesaler and shipper more secure against such unprincipled conduct on the part of customers, and make dealers afraid of exposure."

A great many lumbermen look upon an agreement to buy or sell lumber as a contract which may be terminated at their option. They do not go so far as to argue that they can send in an order naming a price or make an offer to sell at a given figure and endeavor to hold the second party to this one-man agreement, but, on the other hand, they act as though the interests of only one party concerned should be regarded by exercising the right to cancel without consulting the wishes of anyone else. This is particularly true where orders are cancelled by the buyer.

In some cases it might be unwise for the manufacturer to attempt to hold his customers to the terms of a contract for the sale of lumber voluntarily entered into some time ago; but the manufacturer or wholesaler is not obliged to pay any attention to curt request to "please cancel our order No. 1117." Another party's wishes are consulted when an order is placed and that party's consent is necessary to rescind the order. It stands to the credit of shippers, that where the least responsible of them have refused to supply one car of lumber or shingles, orders for dozens of cars have been cancelled by buyers. The cancelation of an order is not an unusual thing; failure to ship where it is possible to do so is an unusual thing. This observation does not apply to retail buyers any more than, if as much as, it does to the big consumers, the factories, car construction companies, railroads, etc. The lumber manufacturer or wholesale dealer could enforce his contracts by appealing to the courts, but this would afford no actual relief, as the profit on a carload of lumber would not cover the cost of such proceedure.

The representative of one of the largest manufacturers in the West, said recently, that a certain car building company had asked to have cancelled an order for a very large quantity of lumber. In this case the representative called upon the buyer and explained that within the last twelve months his company had shipped carload after carload, when the same stock could have been sold for $2 or $3 a thousand more than was obtained under the old contract price. The cancellation order was withdrawn and the matter arranged to the mutual satisfaction of both parties.

A whirlwind of cancellations has swept over the country. In very few instances has such action been necessary. If the buyer be not in a position to receive the lumber and care for it at this time he might request the seller to withold shipment, but he should let the order stand. The lumber business is not going to the "demnation bowwows" although trade may be a little quite at this time. From current reports it would seem that within a very few months those concerns which are endeavoring to cancel every outstanding order they have, will be scouring the country endeavoring to secure lumber. The right to cancel an order, never has, and never will exist. It is granted by courtesy on the part of the seller, who is so afraid of losing a customer, that he permits him to play fast and loose with business principles. There never has been a time when lumbermen have been indifferent to sales. The net fruits of their attitude are "cancellation."

BRITISH COLUMBIA'S TIMBER REVENUE.

At a meeting of the British Columbia Timber and Forestry Chamber of Commerce, held in Vancouver on December 4 last, the Government's revenue from timber in that province from June to October was shown to total as follows:

From timber leases	$ 23,743.74
From timber licenses	536,559.45
Hand loggers' licenses	2,680.00
Timber transfers	2,852.25
Timber royalties	100,238.33

Mr. H. Youdall made a statement showing that a timber license of $140 at 6 1-2 per cent., compounded for 21 years, amounts to $6,314.28. In addition to this expense, say $100 per section expenses, staking and advertising at 6 1-2 per cent. amount to $375.30, making a total of $6,689.58. The holder has to run the risk of fire, and at the end of the 21 years his holdings go to the Government, and if his license is not renewed he loses them altogether. Mr. Youdall was of the opinion that $125 is enough for a license for the low lands, while $100 would be fair for the upper country. Moreover, it should be possible to have the 21 years' limit renewed for another 21 years.

THE FINANCIAL OUTLOOK.

Much difference of opinion prevails as to what the immediate future will bring forth in the financial world. President Chas. S. Mellen, of the New Haven Railroad, is thus quoted in a Hartford despatch to the "New York Commercial": "This is not a rich man's panic. It is a widespread distress, rapidly extending itself to the farthest sections of the country, and it will levy its tax in such a way that no man, woman or child shall fail to bear his portion of the burden." On the other hand, "a man who ranks as perhaps the highest authority in the United States on trade conditions," is quoted by the "New York Evening Post" to the effect that the business situation will probably show improvement in a month, and that the panic will leave no serious industrial disturbances in its wake.

GILLIES CASE DISMISSED.

Mr. Justice MacMahon dismissed with costs both actions brought by the Gillies Bros. Company, Limited, against the Temiskaming & Northern Ontario Railway Company for damages caused by fires said to have been started by sparks from locomotives. One was for $24,000 and the other for $91,000.

B.C. Timber and Forestry Chamber of Commerce

Following the announcement in our last issue of the formation of the "British Columbia Timbermen's and Forestry Association" on the Pacific coast, comes the news of the merging of this organization into what will be known as the "British Columbia Timber and Forestry Chamber of Commerce." This change was the result of a largely attended meeting of lumbermen, held in Vancouver on November 27 last. That the scheme has behind it the approval of the trade in that province was evidenced by the number of representative lumbermen who took part in the opening proceedings. The purposes for which the Chamber has been created are declared by the by-laws to be as follows:

To bring together the persons who are interested in timber or timber lands who are eligible for membership, and to promote their mutual interests.

To consider ways and means for the protection and preservation of the forest resources of this province, especially against fire, and to suggest the enactment of legislation conducive to this end.

To make such arrangements for the promotion of its objects as the chamber shall deem expedient with other similar societies or associations.

This chamber may organize branch chambers in different parts of the province of British Columbia for the furtherance of its objects, or

E. P. Bremner, President B.C. Timber and Forestry Chamber of Commerce.

may become affiliated with organizations having the same or similar objects.

To provide ways and means for raising the necessary funds to defray the expenses incurred in carrying out the objects of this chamber.

As a result of the election of officers, the following were appointed: Hon. president, John Hendry; president, E. P. Bremner; first vice-president, Captain M. N. Garland; second vice-president, Wm. Shannon; secretary-treasurer, Dr. Judson F. Clark; executive committee, E. H. Moore, A. F. Sutherland, M. S. Logan, W. Ellis, T. F. Paterson, C. H. Dunlevy, Ward De Beck, H. Youdall, E. H. Heaps and C. S. Battle.

Holding Timber Licenses.

In an able paper by Dr. Clark, the newly appointed secretary, the weakness of the present method of holding timber under special license was pointed out. Dr. Clark spoke as follows:

The present legislation governing the issuance and renewal of special timber licenses was enacted about three years ago, when the Government, citizens generally, and even the lumbermen, had very vague ideas as to the amount of unlocated timber standing on Crown lands, and when the recent remarkable activity in timber locating was foreseen by no one.

As a result of this legislation, some seven million acres of timber lands have been placed under special timber license. This area bears a stand of mercantile timber variously estimated at from 90 to 140 billion feet, and which unquestionably constitutes the most valuable timber asset of the Province of British Columbia.

According to the present timber legislation, the owners of this timber must remove it before the expiration of twenty-one years, which marks the legal limit of extension of the special timber license.

This timber must, of course, be logged in competition with logging operation on Provincial timber leases, Dominion leases in railway belt, and on Crown-granted lands. The timber leases and Crown grants being the first timber to be taken up, naturally comprise much of the choicest logging lands of the province. They have also an advantage over licensed lands in the matter of payment of ground rent and stumpage dues, and the logger on the granted lands has a further advantage in that his logs may be exported to foreign parts.

There is, of course, no cause for complaint on the part of the logger on licensed lands, that the other fellows have a better show. I merely wish to point out that the owners of the seven million acres of timber lands held under special license (and this area is daily being added to) must within twenty-one years, and in competition with logging operations on leased and granted lands, clear their lands of timber, for, according to the law as it stands, they lose all title and rights whatsoever in any timber that remains at the expiration of the twenty-one year period.

If we assume the lowest possible estimate of the stand of timber on these lands, namely, ten thousand feet board measure, per acre, it means that the owners of the timber held under special timber licenses already granted must slaughter some seventy billion feet within the next two decades. Let me repeat, this is the lowest possible estimate. The amount of timber actually concerned may greatly exceed a 100 billion feet, and whatever the amount, it is, as already noted, the province's most important timber asset, and the area concerned is being daily increased as new licenses are issued.

It is, of course, a moral impossibility that any such vast cut of timber could be forced on the market at any price within that time, and were it possible, it would be in the last degree undesirable to do so, whether viewed from the standpoint of the Government, the logger, or the milling industry. Even the consuming public would dearly pay for the temporary advantage of low prices which would obtain during the slaughtering process by excessive charges for lumber, when the wrecking of the forests had been completed.

As I have said, no such cut can be placed on the market at any price. What must happen, should there be no change in the law as it stands, will be that every owner of special license timber must proceed with all possible despatch to cull his lands of the best of the timber, that he may realize what he may before he loses title. The loggers would have to sell even their best grades at the smallest possible margins, for there will, during the twenty-one years, be an endless struggle with an overproduction of logs. The financial difficulties incident to this overproduction will, of course, not be limited to loggers operating on special license lands, but will be felt only less keenly by those logging leases, and Crown grants thus are the interests of all loggers in this matter in harmony.

The overproduction in the matter of logs will, of course, be accompanied by a similar overproduction of lumber. The present markets open to the products of the British Columbia milling industry absorb with difficulty the present cut of less than one billion per annum. What must the situation be if the mill men be forced to find a market for from five to seven times the present output?

Naturally the influence of such forced logging will be most disastrous for the forest as a provincial resource. The culled lands will everywhere be veritable fire traps, and in the end more timber will undoubtedly be burned than scaled.

The ultimate loss to the province at large might well defy computation. The loss of revenue due to the destruction of timber on the culled lands by fire might easily be a matter of many millions of dollars, but certainly would be one of small importance compared with the crippling for at least half a century of a lumber industry which is essential to the development of all the natural resources of the province, and which, under wiser legislation, should have a normal growth to much larger proportions, and be maintained as a prosperous and permanent institution for all time to come. To those who have not given the subject careful thought, the picture I have drawn will doubtless appear grossly exaggerated. I submit, however, that no thinking man can come to any other

conclusion as to the effect of the present time limit on the future of the forest, and that of the lumber industry; and that the situation becomes daily more aggravated as the area concerned is increased.

The remedy is fortunately obvious and easily applied, and is alike in the interests of all concerned. There must be a sufficient extension of the time allowed for the removal of timber held under special license to admit of conservative and economic lumbering methods. As a forester, I would go a step further, and say that the title and taxation on timber lands should always be such that the owner could, with perfect safety and as a plain business proposition, cut his crop with a view to returning in later years for a second and succeeding crop.

The President's Address.

At a second meeting of the newly organized Chamber, held in Vancouver on December 4, a large gathering of new and prospective members listened to an instructive address from President Bremner, as follows:

In inaugurating our formal opening I desire, as your president, to congratulate you on the success which has so far attended your efforts in the general affairs of organization, the large initiatory membership, and above all the widespread approval and enthusiasm which the founding of the British Columbia Timber and Forestry Chamber of Commerce has caused amongst those who are interested in timber and its industries throughout our province.

Having made a favorable commencement, it would seem that our complete success should be well assured. This, however, will depend upon the individual endeavor of each and every member to work in cooperation with your officers and committees.

I think you will understand that our first duty is to bend every effort to make the membership roll as large and influential, as extensive and as complete as the great importance of our standing timber demands. I wish particularly to lay stress on this matter of membership, for it is by means of numbers that our influence will be most assured, besides the advantage to be gained by wise counsel of interests affecting not simply one particular section but for the well-being of all within the province.

In the by-laws, which will be presently submitted to you for approval, will be found means for creating branch organizations in any part of the province where it would seem advantageous to do so. In this way we may expect to reach and enlist the support of practically every individual owner of timber in British Columbia.

At present the general outline of executive work for the Chamber would suggest itself as:

(1) The securing of something like stability of title in special license lands.

(2) The definite fixing of license fees and royalties for some years to come.

(3) The survey of timber lands under conditions which more nearly meet the approval of timber owners and the Government than the present usages permit.

(4) Prevention of forest fires.

Approval of Government Timber Policy.

In dealing with the first of our requirements, I wish to say a word complimentary to the Government in the general direction of their timber policy. They have aimed to have lands otherwise non-revenue producing yield the highest posible annual returns. That the system has been good from a revenue producing standpoint there can be little doubt, for while the tax is sufficiently large to give them indeed a very large revenue, it, at the same time, involves no shrinkage of the asset. The policy is prudent, moreover, when compared with that adopted in Ontario, which provides for the sale of timber by competition, but which, apart from the immediate bonus received, carries an insignificant revenue in the matter of rental fees, the sum of $5 per square mile, or less than one cent per acre, as compared with the 22 cents an acre per annum which license holders in British Columbia pay into the revenue of the province. It has been considered that the license fee of $140 per square mile has gone quite to the limit, if not indeed beyond the limit, of what could fairly be expected from the holders of the land, and it is generally believed that it would be in the Government's interest to reduce our present high fee, in order to encourage as much as possible the conservation of the forest instead of forcing the holders into the necessity of slaughtering their timber in order to realize on their investment. Any policy, I hold, that will tend to the conservation of timber within the province is to the advantage of the Government and the people at large, even to a greater extent than to the owner of the timber.

Stumpage Dues.

The doubtfulness of the future stumpage dues which license holders shall be required to pay is a matter of very great weakness in our present titles of timber lands. I think you will agree with me, gentlemen, that soundness of title should be the basis of all sound business, so also in connection with the timber industry, and that any instability in the matter of title constitutes a severe disabiliy to logging or manufacturing, spreading itself in all directions where the traffic of timber gives employment. We trust and expect that with proper representations the Government will see that what is desirable from the standpoint of one who owns timber is even parallel with the best interests of the province in these matters of making permanent license fees and stumpage dues. To give practical illustration to the evil effects of an industry dependent upon the wisdom, and existing, as it were, by the sufferance of the lawmakers, we have only to cite the conditions prevailing a few years ago in the mining industry. At that time, on account of some doubts entertained by capital as to the trend of laws affecting them, mining received a setback from which it took years to recover. I think it will be admitted by any who have watched the progress of events in recent years that the present prosperity of the mines is traceable to reasonable legislation quite as much as to the wealth contained within the bowels of our mountains. Profiting by this experience, I believe that the matter of stability of timber licenses is one of the first duties of the Government.

The comparison of the timber industries with those of mining are furthermore interesting from the standpoint of production as compared with the revenue which each produces. The output of the mines is said to be valued this year at about $25,000,000, yielding a revenue in royalties of about $200,000. Our cut of logs for the year 1907 will probably total over rather than under 900,000,000 feet. Of this about 50,000,000 feet will be cut from the Dominion belt and on Crown grant lands, from which latter the Government will receive no revenue in royalties or rentals. The total value of the timber product will be from $18,000,000 to $20,000,000. Notwithstanding this disparity in value between mineral output and timber, the revenue derived from the timber in 1907 will probably reach the sum of $1,500,000—more than seven times that received from the mines. Of this amount probably not less than $1,250,000, coming from about 10,000 licenses, will be for license fees alone. If we take the total revenue of $1,500,000 it would represent an amount of probably over $2 paid into the Government coffers this year for every thousand feet of lumber cut upon its lands held under special license. When comparison is made of these two industries—between their production and their contribution to the Provincial Treasury—it argues a conclusion of a most emphatic unfairness in exacting so much in taxes from one particular industry, an industry which now contributes more than half the required revenue of the province.

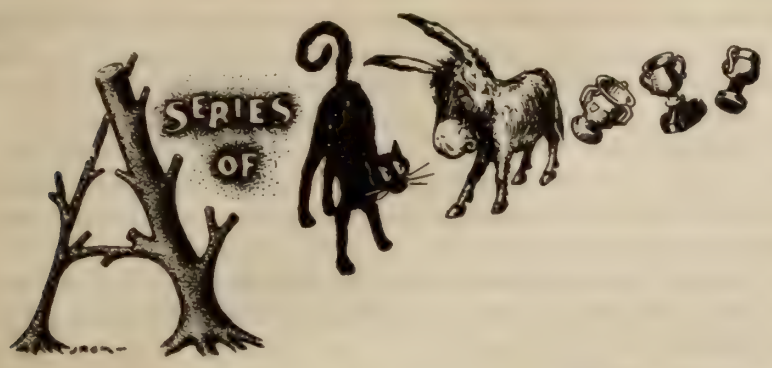
Surveying Methods.

The surveys of the timber holdings will call for very careful consideration of the Government, and it has been the generally expressed belief that some flexibility of present regulations would be desirable, to permit a proper closing in of timber tracts so as to include small timber areas between the lines of claims, where it had been the intention of the claim holder to secure the land en bloc. It is a well understood matter that it would be highly desirable to have timber on such isolated patches cut during the general logging operations on the tract, as otherwise the timber would only be left a prey to forest fire.

Great Fires.

The good results which have been obtained by the efforts put forth during the last summer by the Government in handling forest fires has borne most encouraging results, and I believe it would be the duty of your executive to give such suggestions to the Government as would be useful in curbing the inroads of this, the worst enemy of our forest.

As a final word I wish to again urge upon the Chamber the necessity of taking every opportunity to extend our membership. There is no reason why the Chamber should not include at least 1,000 members in a very few weeks. I do not believe that this number would even then include every license holder in the province. Such a membership would make the meeting of the financial requirements of the Chamber very easy. It will of course be expected for the present that monetary demands will be met cheerfully by the members of the Chamber by voluntary contribution.



occurred at the Waldorf Hotel, Hamilton, on Friday, the thirteenth instant, when a large number of purblind kittens were shown light in the Land of Hoo-Hoo. It was Vicegerent Snark W. J. MacBeth's first concatenation, and he deserves much credit for the splendid arrangements made for the event. In this connection he received the hearty support of the Hamilton members, who sustained their reputation for "doing things." In ritualistic work and exemplification of degrees the Vicegerent Snark was assisted by J. A. O'Hearn, Vicegerent for Eastern Michigan, Past Vicegerents W. C. Laidlaw, Dan Ferguson and J. G. Cane.

The officers of the evening were:

Vicegerent Snark, W. J. MacBeth, Toronto.
Senior Hoo-Hoo, H. P. Hubbard, Hamilton.
Junior Hoo-Hoo, J. A. O'Hearn, Toronto.
Bojum, W. A. Hadley, Chatham.
Scrivenoter, C. C. Wallace, Toronto.
Jabberwock, Joseph Hadley, Chatham.
Custocatian, Thomas Patterson, Hamilton.
Arcanoper, J. Charles Dietrich, Galt.
Gurdon, John Laking, Hamilton.

Friday, the thirteenth, apparently aroused no misgivings; superstitions were cast to the winds, and a class of twenty-five kittens presented themselves for the mysteries of the order. The journeys east and west through the onion bed were made under the greatest difficulties, and only the undaunted courage of the candidates enabled them to reach the goal and be finally accepted as a devotee of the Great Sacred Black Cat. All received their dose of allopathic medicine in a humble manner, doubtless appreciating their helpless condition and need of stimulants. The kittens were:

H. M. Gray, Jas. Thomson & Company, Hamilton.
Andrew McIllwrath, Flood & Conkling Company, Newark, N.J.
Jas. P. Johnson, Campbell & Carman, Toronto.
Harvey Crosthwaite, Patterson-Tilley Company, Hamilton.
G. H. Hagar, S. A. Hagar & Son, Toronto.
E. F. Rathbone, Geo. Rathbone, Toronto.
Jas. Thomson, Jas. Thomson & Company, Hamilton.
Herbert Capewell, Western Commission Company, Toronto.
H. H. Marsh, J. Marsh & Son, Grimsby.
Frederic Taylor, D. Aitcheson, Hamilton.
Wm. Laking, Wm. Laking & Company, Hamilton.
M. S. M. Long, Long Lumber Company, Hamilton.
W. J. Levy, Levy, Weston & McLean, Toronto.
G. W. Robinson, Berlin Machine Works, Hamilton.
A. S. Brennen, M. Brennen & Sons Mfg. Company, Hamilton.
C. S. Kilgour, Kilgour Manufacturing Company, Hamilton.
G. S. Smith, M. Brennen & Sons Mfg. Company, Hamilton.
W. J. Aitcheson, D. Aitcheson & Company, Hamilton.
J. T. Leckenby, Ontario Box Company, Hamilton.
C. H. Taylor, Hamilton Lumber Company, Hamilton.
Jesse Tilley, Patterson-Tilley Company, Hamilton.
R. G. Densmore, Ottawa Lumber Company, Ottawa.
Geo. Ingram, W. J. Lovering & Company, Toronto.
T. McCabe, John Donogh Lumber Company, Toronto.
A. H. McCall, A. McCall, Simcoe.

The initiation proceedings were completed about midnight, when the old cats and kittens adjourned to the large dining room of the Waldorf, where a capital repast was served. Reaching the toast list, the Vicegerent Snark expressed his appreciation of the honor which had been done him and also his pleasure at having such a large concatenation. When the toast of "The King" had been duly honored, he proposed the toast of "The Supreme Nine," coupling with it the name of W. A. Hadley, Supreme Bojum. Brother Hadley was enthusiastically received and replied in his peculiarly affable manner.

"Reforestry and Our Timber Resources" was responded to by H. Capewell, of the Western Commission Company. In well-chosen words he pointed out the great importance of the subject of forestry to the lumbermen and to the nation. In his opinion no industry in the country was so neglected by the governments as that of lumber. Taking the estimates of Crown Lands officials, the white pine of Ontario would be extinct in less than thirty years if the present policy should be continued. If from no other motive than to protect its revenue, the Government should take immediate steps to preserve the timber supply. The annual revenue from Ontario Crown timber lands is $2,000,000, yet the Government spends less than five per cent. of this amount for regrowing and protection of timber. Mr. Capewell contended that at least 75 per cent. of the revenue should be used to perpetuate the timber supply. Notwithstanding the present Government's criticism of the Liberal policy in respect to the administration of the Crown lands, no progress was being made towards the adoption of a forestry policy which would preserve the greatest inheritance which the country ever had. During the past two or three years we had heard a great deal about high prices for lumber. Fifty years ago Ontario white pine was worth 5 1-2 cents per cubic foot; to-day it is worth 60 cents. Twenty years hence, he predicted, prices would be prohibitive. Mr. Capewell concluded with a strong appeal to the lumbermen to help the forestry movement in every possible way.

W. C. Laidlaw, of the R. Laidlaw Lumber Company, Toronto, replied to the toast of "The Wholesalers," pointing out some of the many burdens which the middleman is called upon to bear. Mr. H. P. Hubbard, of E. C. Atkins & Company, saw manufacturers, also responded in a happy manner.

The "Traveling Salesman" was delegated to M. P. Kinsella, of the Skillings, Whitneys & Barnes Lumber Company. Mr. Kinsella's remarks were naturally from the standpoint of one familiar with the handling of white pine, "the king of the forest," After expressing his faith in the future of white pine and the lumber business in general, he said:

"White pine for the past year has been hammered and combatted by every conceivable substitute, and for months past by the stringency of the money market. Under the conditions it is marvellous how it has maintained its value, and I believe it will strengthen in the very near future. The production the past year, including both the Ottawa valley and the Georgian Bay district, will be many millions short of previous years. This year the late spring delayed the getting of logs down and the starting of the mills, so the season was well advanced before many mills got running. I know my firm will be thirty to forty million feet short of what they expected to get in the spring. At present there are many grades low in Canada, and with a normal demand everything will be exhausted before the 1908 stock is on the market. We in Ontario must admit that an enormous quantity of spruce from Quebec and New Brunswick has come into this market this past season, at prices that could not have netted the manufacturer more than cost. It was not a case of profit, but get money. This condition cannot last long. Tight money will necessarily hold back the manufacturer from getting out much stock this winter, and I know of many important spruce manufacturers who, on account of the exceedingly high price of pulpwood—$10 to $12 per cord for peeled wood—will make no lumber next season, would on lumber, judging by the prices some dealers claim to have but put their full product into pulpwood, and realize far more than they bought for. The stock of white pine logs being gotten out this winter will be very much less than previous seasons, as past experience has shown the limit holders that there is more money to be made out of the advance in stumpage than by manufacturing it into lumber, especially on a market that might be considered a little suspicious. The stocks in the local yards are generally admitted to be extremely low, and if the usual amount had been transferred from the mill yard to the local yards you would find less lumber in the mill yards than ever before. The money stringency is merely a temporary check—the country has too many assets to suffer permanent injury. One word to my fellow-salesmen: Put on a pleasant smile, and if you have not had a big week, possibly some jolly good looking fellow has been ahead of you and scooped in all the orders."

The toast of "Our Cousins" followed. It was received with great

applause and brought a response from Vicegerent Snark O'Hearn, of the Eastern Michigan district.

Hoo-Hoo banquets are always enjoyable, but the splendid program of music provided on this occasion, consisting of some of the best professional talent, greatly added to the evening's entertainment. The members are also indebted to the Ferguson Lumber Company, of London, Ont., for a card case containing a thirty-day insurance policy for $1,000.

14080

NEW INSPECTION RULES FOR HARDWOOD LUMBER.

The new rules for the inspection of hardwood lumber promulgated by the National Hardwood Lumber Association and adopted by it at the Atlantic City meeting in May last, which went into effect on December 1, have recently been issued by the secretary of that association.

It will be recalled, says "The Hardwood Record," that several important changes in standard lengths and in the system of inspection are instituted by these rules. Standard lengths under the new system will be 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16 feet, but not over fifteeen per cent. of odd lengths are admitted. However, it is specified that in the grade of firsts and seconds eight feet is the shortest length admitted, and there must not be more than twenty per cent. under twelve feet, and not to exceed ten per cent. of eight and nine feet lengths. Again, it must needs be recalled that the number of defects admitted to a given grade is based on the superficial measurement of the piece and not on its width, as heretofore. There are no radical changes in the various items known as standard defects, but there is a new grade interjected, viz., finish, which it is specified must be inspected from the good face of the piece, the reverse being sound. The grade of No. 3 Common is divided into two grades. specified as 3A and 3B.

A good many lumbermen from a casual reading of the rules would think that they would make a very important difference in hardwood inspection, but the "Hardwood Record" considers that the new rules are not revolutionary, and demonstrates this fact by taking one wood and specifying where pieces of various sizes and with a given number of defects would fall under both old and new rules. Selecting hard maple for this illustration, it will be found that in firsts and seconds the following table holds:

	Old rules admit.	New rules admit.
1x 6—10 and 11 feet	1 defect	(reduces to No. 1 Common)
1x 7—10 feet	1 defect	0 defect
1x 8—10, 11, 12 and 13 feet ...	2 defects	1 defect
1x 9—10 and 11 feet	2 defects	1 defect
1x10—10 feet	3 defects	1 defect
1x10—11, 12, 13 and 14 feet ...	3 defects	2 defects
1x11—10, 11, 12 and 13 feet ...	3 defects	2 defects
1x12—10 and 11 feet	3 defects	2 defects
1x13—10 and 11 feet	4 defects	2 defects
1x13—12, 13 and 14 feet	4 defects	3 defects
1x14—10 feet	4 defects	2 defects
1x14—11, 12 and 13 feet	4 defects	3 defects
1x15—10, 11 and 12 feet	4 defects	3 defects
1x 7—16 feet	1 defect	2 defects
1x 8—9 feet	0 defect	1 defect
1x 9—8 and 9 feet	0 defect	1 defect
1x10—8 and 9 feet	0 defect	1 defect
1x11—8 and 9 feet	0 defect	1 defect
1x12—8 feet	0 defect	1 defect
1x12—9 feet	0 defect	2 defects
1x13—8 and 9 feet	0 defect	2 defects
1x14—8 and 9 feet	0 defect	2 defects
1x15—8 and 9 feet	0 defect	3 defects

From this analysis it will be seen that twenty-six pieces of a definite size having one defect, grade lower under the new rules than under the old; that four pieces having two defects grade lower; and that two pieces on account of small measurement, that were formerly firsts and seconds, now go into No. 1 Common.

On the other hand, nine pieces of specific size, of one defect, are raised from No. 1 common to firsts and seconds; five pieces with two defects are likewise raised, and two pieces of three defects are also raised. In other words, two pieces of certain sizes are dropped to No. 1 common, thirty pieces have the number of defects lessened in number, and sixteen pieces formerly No. 1 common are raised to firsts and seconds. However, one must bear in mind that six inches to nine inches, ten and eleven feet long, are sizes that prevail to a much greater extent than eight and nine feet boards of a width greater than eight inches. It is clearly manifest, thesefore, that in the aggregate the grade of firsts and seconds maple is raised rather than lowered.

In No. 1 common maple the following schedule will illustrate disposition of the various sizes and defects admitted under both the old and new rules:

Old rules admit—
- 3 inches and over wide, 6, 8, 10, 12, 14 and 16 feet.
- Pieces 3 or 4 inches wide—1 clear face.
- Pieces 5 inches wide—1 defect.
- Pieces 6 feet—6 to 9 inches wide—1 defect.
- Pieces 6 feet—10 inches and wider—2 defects.
- Pieces 8 and 10 feet and up—2-3 clear in 2 pieces.
- Pieces 12 feet and up—2-3 clear in 3 pieces.
- Size of cutting—4 inches x 2 feet, 3 inches x 3 feet.
- In 10 feet and over heart must not show over 1-16 length of piece.

New rules admit—
- 3 inches and over wide, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16 feet
- Pieces 3 and 4 inches x 4 to 7 feet—clear.
- Pieces 3 and 4 inches x 8 to 11 feet—2-3 clear face in 2 pieces.
- Pieces 3 and 4 inches x 12 feet and over—2-3 clear face in 3 pieces.
- Pieces 5 inches and wider, 4 to 11 feet—2-3 clear face in 2 pieces.
- Pieces 5 inches and wider, 12 feet and up—2-3 clear fact in 2 pieces.
- Cutting to be 2 feet by full width of piece.
- Heart must not show over 1-2 length of piece.

In No. 2 common maple the following will show the maximum defects and the disposition of various sized pieces under both the old and new rules:

Old rules admit—
- 3 inches and wider, 6, 8, 10, 12, 14 and 16 feet.
- Pieces 6 to 10 feet—50 per cent. clear in 3 pieces.
- Pieces 12 feet and over 50 per cent. clear in 4 pieces.
- Cutting 3 inches x 2 feet.
- Heart 1-2 length of piece.

New rules admit—
- 3 inches and wider, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16 feet.
- Pieces 4 to 11 feet—50 per cent. clear face in 3 pieces.
- Pieces 12 feet and over—50 per cent. clear face in 4 pieces.
- Cutting 3 inches x 2 feet.
- Heart 3-4 length of piece.

In No. 3 common the analysis is continued as noted in the following:

Old rules admit—
- 3 inches and wider.
- 4 feet and up—even lengths—25 per cent. sound cutting.

New rules admit—
- 3 inches and wider.
- 4 feet and up—odd lengths—25 per cent. sound cutting.

Of course anyone who desires to know precisely what all the changes incorporated in the present rules involve will be obliged to figure out an analysis similar to the above, covering the different hardwoods in which he is interested.

Rules and Regulations Governing the Liverpool Quay Measurement of American Hardwood Lumber.

The following rules and regulations governing the Liverpool Quay Measurement of American Hardwood Lumber, to go into effect next month, were unanimously adopted at a joint meeting of the elected representatives of brokers and merchants, held at Liverpool, October 30 last:

(1) The measurement shall be ascertained by the "American board measure rule.

(2) First or prime quality, medium quality, and cull quality are

(Continued on Page 24.)

MARKET CORRESPONDENCE

OTTAWA VALLEY LETTER.

(Correspondence of THE CANADA LUMBERMAN.)

Ottawa, Dec. 9., 1907.—With the closing of J. R. Booth's mill on December 5 the sawing operations in the Ottawa district came to an end for the season. The first mill to stop was the East Templeton Lumber Company's mill a fortnight ago. On November 30 the Hawkesbury Lumber Company and the James MacLaren Lumber Company discontinued operations. The Shepard & Morse Company mill closed on December 3, and the W. C. Edwards Company on the following day. All these mills gave employment to about 2,200 men . Some of this labor will be needed in the mills where winter operations are in progress, but most of the men have had to look for work elsewhere. The gangs taken up to the shanties are about 20 per cent. smaller than in other years.

In most cases the lumber manufacturers kept their mills running long enough to make up for the two weeks lost in the beginning of the season. The MacLaren Company never conducted operations so far into the winter before, except last season, when a few days' sawing was done in December. Apparently the lumber cut was a little larger than last year. The condition of the Booth mill, which is generally regarded as a key to the situation, will not be definitely known till the big task of stocktaking is complete. Mr. Booth, however, estimates that the output is a little more than last year, when the cut amounted to 85 million feet. During the past summer the water power was excellent, as compared with one of the worst seasons in the history of the mills the year before. The Booth cut dropped 20 per cent. last year in common with many other mills. The output of the Shepard & Morse mill, including the quantity of lumber sawn in outside mills for the firm, amounts to about twenty-four million feet, or an increase of a couple of million over last year.

The lumbermen are experiencing a quiet period in trade, but have enough to keep them busy in stocktaking and straightening up business after the season's manufacturing. No change is looked for in the market until the New Year. Pine stock is low and, although buying is not very active, prices are not weakening. On the contrary, an upward tendency is apparent. When dealers have to look for stocks they are often compelled to pay a little more than the rates generally quoted before they can get supplied. One manufacturer who had to secure some additional lumber to fill an order this week was obliged to give $41 for 1 1-2 inch good pine strips and $45 for a large order of the 2 inch sort. The manufacturers seem to be sold up, and there is a strong impression that if money becomes more plentiful prices will undergo sharp advances. The Ottawa valley lumbermen expect to realize a larger price from the British importer next season, as the demand is keen for the sort of lumber wanted on the market of the old country.

The curtailment of the lumber cut with the Ottawa manufacturers does not promise to be as serious as elsewhere in the province. A representative mill owner stated that his camps will be all running as usual, with smaller gangs of course, but that the cut is not likely to fall more than 20 per cent. below last year.

One of the scarcest articles on the Ottawa valley lumber market is good Canadian cedar shingles. Buyers have been compelled within the last few weeks to give 50 cents a thousand in advance and now are practically unable to buy in as large quantities as they desire. There has been a long period of quietness in the lath trade, which is not undergoing any change.

Lumbermen will be much affected if a dam which the Ottawa City Council propose to construct across the river at Britannia is carried out. The city is contemplating the work in connection with the development of water power, and the position of the lumbermen has been discussed a good deal. Between two and three million pieces of timber come down the Ottawa every year, and the lumbermen will have to be assured that the proposed dam would not increase the expense of the drive. The obstacle would have to be overcome by the use of sluices.

The Port Arthur City Council are said to be negotiating with a pulp and paper company, the identity of which is not announced, with a view to the erection here of mills which will have a capacity for fifty tons of paper each day.

NEW BRUNSWICK LETTER.

St. John, N.B., Dec. 2, 1907.—The local lumber manufacturing season has about reached its finish. The mill of Miller Bros., at North End closed down on Monday last, as did also Charles Miller's mill at Pokiok. The large mill of Murray & Gregory, at Marble Cove, will close down on Friday night. John E. Moore's mill at Pleasant Point closed down about one week ago. The plants of Randolph & Baker ceased sawing about three weeks ago. Hilyard Bros. will cease sawing when they have finished the raft which is at present in their mill boom, which will be in about five or six days. J. R. Warner & Company's mill on Straight Shore has also finished work for the season. This year the sawing season ended about three weeks earlier than was the case last year.

The strength of the cedar shingle market remains a remarkable feature of the situation. This line of goods had a truly remarkable year. Prices have reached almost phenomenal levels, and even in the warm weeks, when a considerable depression always occurs, but little sign of weakness was perceptible. High figures still predominate, and the firmness hangs on tenaciously. The situation is one of such remarkable conditions that any conjecture as regards the future would be a guess of the most decided nature.

With the shutting down of the mills and the freezing of the rivers, the cedar shingle production of this province will cease at once to be an important factor in the situation. Local stocks are fairly light, two and a half millions of "extras" and one and three-quarter millions of "Clears" would easily cover the available quantity at local mills. An enquirer for cedar shingles would be quoted at from $3.25 to $3.35 per thousand on non-dutiable "Extras," and from $2.75 to $2.85 on dutiable "Clears," f.o.b., St. John. Freights by schooner are being closed at 30 cents per thousand on shingles to Boston, and 70 cents on lath to New York City.

The coming winter and spring will no doubt eclipse all former years for a generation or more in the smallness of shipments of lumber to foreign countries from the Province of New Brunswick. In spruce deals in particular, the export will be light. In the course of seasons when prices are high, many hundreds of thousands of feet of lumber would be shipped by rail from inland points to be carried to Great Britain on the winter liners. These lots would be sawn at portable mills. The cost per thousand of manufacturing is naturally higher than that of lumber cut in the large stationery plants and the owner of the portable must get good prices for his output in order to make even a small margin of profit. With the lack of stimulus so prominent a feature in both the English and American spruce markets, there is little inducement to undertake this sort of production. Judging from all indications the output from these portable plants will be fifty per cent. less than the output of last winter.

HARDWOOD STOCKS NOT LARGE.

According to "The Lumber World" the annual stock report of the Michigan Hardwood Manufacturers' Association for the twelve months ended October 1, contrary to the general expectation of the trade, reveals but a small excess amount of stock on hand among the manufacturers in comparison with the figures for the year ended October 1, 1906. The returns made indicate an amount of stock held by seventy-five manufacturers of 151,773,000 feet, or 6,431,000 feet more than was on hand October 1 last year. The accumulation since July 1 of the present year has been but 7,366,000 feet. Of the total amount of stock on hand, orders as yet unfilled were held for 109,575,000 feet, which would leave but 42,198,000 feet unsold.

In but two items on the list was a greater amount of stock on hand October 1 than on the same date last year. One of the items is birch, with an excess of but 65,000 feet, while the only decided increase in stock is in maple, which shows an increase of 13,118,000 feet over last year. Basswood, beech and elm each show a smaller amount held than the year before. Of the stock unsold but one item is in excess of that unsold October 1, 1906, and that is birch, though the excess is but 536,000 feet.

The estimated total cut by the mills represented in the Michigan Hardwood Manufacturers' Association for 1907 is 417,162,000 feet, which will be approximately 30,000,000 feet more than was cut in 1906. The total cut of last year is given in the following table in comparison with the estimated output this year:

	Cut, 1906.	Estimated cut, 1907.
Ash	8,695,000	9,511,000
Basswood	26,238,000	26,382,000
Beech	43,052,000	40,622,000
Birch	28,858,000	26,083,000
Elm, rock	3,267,000	2,674,000
Elm, soft	19,907,000	24,366,000
Maple	241,207,000	265,932,000
Other woods	15,817,000	21,592,000
Total	387,041,000	417,162,000

The subjoined tables indicate the stocks on hand, unfilled orders, unsold stock of the various hardwoods, and so arranged as to permit of comparison with the figures of other periods.

STOCK ON HAND.

	July 1, '06	Oct. 1, '06	Jan. 1, '07	July 1, '07	Oct. 1,'07
Basswood	12,520,000	11,559,000	7,507,000	8,912,000	7,241,000
Beech	16,793,000	17,714,000	15,269,000	18,627,000	17,333,000
Birch	13,485,000	17,022,000	12,030,000	11,625,000	17,087,000
Elm	11,828,000	12,118,000	8,549,000	9,433,000	10,065,000
Maple	93,032,000	86,929,000	73,636,000	95,810,000	100,047,000
Total	147,658,000	145,342,000	116.991,000	144,407,000	151,773,000

UNFILLED ORDERS.

Basswood	7,371,000	7,312,000	5,444,000	8,132,000	6,386,000
Beech	12,142,000	10,966,000	12,845,000	15,355,000	14,930,000
Birch	8,991,000	8,347,000	6,588,000	6,158,000	7,876,000
Elm	5,612,000	6,696,000	5,919,000	5,722,00	5,392,000
Maple	63,760,000	58,986,000	53,936,000	89,666,000	74,991,000
Total	97,876,0000	92,307,000	84,732,000	125,033,000	109,575,000

STOCK UNSOLD.

Basswood	5,149,000	4,247,000	2,063,000	780,000	855,000
Beech	4,651,000	6,748,000	2,424,000	3,272,000	2,403,000
Birch	4,494,000	8,675,000	5,442,000	5,467,000	9,211,000
Elm	6,216,000	5,422,000	2,630,000	3,711,000	4,673,000
Maple	29,272,000	27,943,000	19,700,000	6,144,000	25,056,000
Total	49,782,000	53,035,000	32,259,000	19,374,000	42,198,000

POLES FOR WIRING.

A circular recently issued by the United States Department of Agriculture (Forest Service) gives the results of some experiments made to determine the best conditions of seasoning for wooden poles used for overhead line construction. Henry Grinnell, in the "Electrical Review," of New York, gives some particulars of these experiments, from which we abstract the following:—

The scarcity of timber suitable for telephone and telegraph poles has of late assumed serious proportions. Latest reports of the Census Office show that there were in operation in 1902 approximately 700,000 miles of pole line. Subsequent additions, however, together with certain railroad pole lines not reported, would enlarge this figure. It is safe to assume that there are in operation at present fully 800,000 miles of line. The average line contains about forty poles per mile, so that there are approximately 32,000,000 poles in use. Assuming that the average life of a pole is twelve years, it follows that for the maintenance of the lines now in operation there are needed each year more than 2,650,000 poles. Such an enormous demand must soon deplete the available supply.

The experiments which are here described were conducted in co-operation with the American Telephone & Telegraph Company, and are among a number carried on by the Forest Service to determine the best means of prolonging the length of service of poles and other timbers. The questions involved in experiments to prolong the length of service of timbers fall naturally into two groups: (a) those which pertain to the rate of seasoning, and (b) those which pertain to the preservation treatment and durability. The present circular deals only with those forming the first group. Those taken up are:—1. At what rates does seasoning progress in telephone poles? 2. Does the time of year when timber is cut affect its seasoning? 3. Does the time of year when timber is cut affect its specific gravity? 4. How much shrinkage occurs in air-seasoning? 5. What are the causes of the checking of poles during air-seasoning? 6. What is the best season for cutting poles?

Experiment stations were established, and the American Telephone & Telegraph Company supplied during the experiments a fixed number of poles each month. All poles were peeled immediately after being cut, and were then hauled or afted to the seasoning yard, where they were skidded in single tiers about two feet above ground. As soon as possible after being placed on skids each pole was numbered, its weight taken, and its circumference at six feet and at thirty feet from the butt (or twenty-five feet in the case of the shorter poles) recorded. Weights and measurements were taken about onee a month until the poles had practically ceased to lose weight. To determine the volume, weight per cubic foot, and specific gravity of the poles, a series of circumference measurements was made at the butt, at successive five foot points, and at the top.

The following statement shows, for conditions corresponding to those of the experiment, the length of time cedar poles cut in the different seasons should be held before shipment to secure the lowest freight charges, and at the same time minimize insurance and storage charges:

	Months.
Winter cut	4 to 6
Autumn cut	7 to 9
Spring cut	3 to 5
Summer cut	2 to 4

While there is but little, if any, difference in the specific gravity of pure wood substance or cellulose, regardless of the kind of tree, the specific gravity of wood as found in the tree varies considerably. The following figures were obtained from the green chestnut poles cut at the three stations at different seasons:

Season of Cutting.	Specific Gravity.
Winter	0.8627
Spring	0.8509
Summer	0.8509
Autumn	0.8467

All wood when undergoing a seasoning process, either natural (by air), or mechanical (by steam, kiln drying, etc.), checks or splits more or less. This is due to the uneven drying out of the wood, and the consequent strains exerted in opposite directions by the wood fibres in shrinking. There is more checking in the wood of broadleaf trees than in that of coniferous trees, more in sapwood than in heartwood, and more in summer wood than in spring wood.

Below is given a summary of conclusions, the number of each corresponding to that of the question which it answers.

1. This, the main question involved in the experiments, is shown to depend entirely upon time and season, and may vary from 2 to 12 months or more.

2. Winter cut wood seasons more regularly than that cut at other seasons, but does not, for many months, at least, reach as low weight as spring cut wood seasoned equally long.

3. In timber of approximately the same age and growth, that cut in winter will have the greatest specific gravity, and that cut in autumn the least.

4. The shrinkage of round timbers in air-seasoning is very slight and may be disregarded.

5. If poles are carefully cut, checking during air-seasoning is comparatively slight. If split or shaken in felling, however, serious checking may result.

6. From the standpoint of seasoning, spring and winter are the best times for cutting. Other considerations, such as custom, availability of labor, and susceptibility to decay, make winter cutting preferable.

LUMBERMAN FINED IN COMBINE CASE.

W. H. Clark, of Edmonton, president of the Alberta Retail Lumber Dealers' Association, has been found guilty on one count in the case which the Government of that province instituted against the association on the assumption that an illegal combine existed. The specific count on which the verdict was rendered is that of conspiring, with P. A. Prince, of Calgary, and others, to prevent or lessen competition in the manufacture of lumber. A fine of $500 was imposed by Chief Justice Sifton, who presided at the Supreme Court at Edmonton, at which Clark and eleven others were named in twelve indictments. Counsel for the defence announced, upon delivery of sentence, that the case would be carried to the Supreme Court. Eleven other counts were in the indictment, but upon all these a verdict of not guilty was rendered.

THE
Wood-Worker
and Retailer

THE BEST ROOF FOR A PLANING MILL.

In discussing the subject of what constitutes the best roof for a planing mill a correspondent of "The Wood Worker," suggests one laid on a solid sheathing of lumber made out of a composition of paper and resinous substance and gravel. This conclusion, he points out, has been reached after travelling quite a long road of experience under all manner of roofing, from the poor and inefficient plank coverings of the backwoods saw mill to thick gravel roofs of big brick factory buildings in cities.

The old type of country mill roof, on which edging boards are taken and laid clapboard fashion, he says, is about the poorest type of roof made. It will keep out the sun, but the lumber is generally put on green, so the sun cracks it and the rain readily finds its way through. It is well known that under such a roof it is difficult to keep either belting or machinery in good condition, and quite frequently more damage is done through the leaking roof than through actual wear on the machines. Then, when the hot, dry time of late summer comes along the plank roof on the saw mill gets thoroughly dry and holds out a standing invitation to the fire fiend. In short, it is not a desirable roofing at all, but it is convenient and comparatively cheap in cost, and on the smaller mills, as it is only for temporary use, it is more generally resorted to than any other kind of roofing back in the woods.

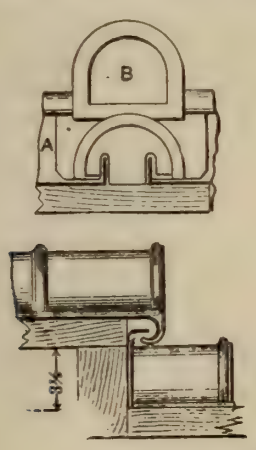
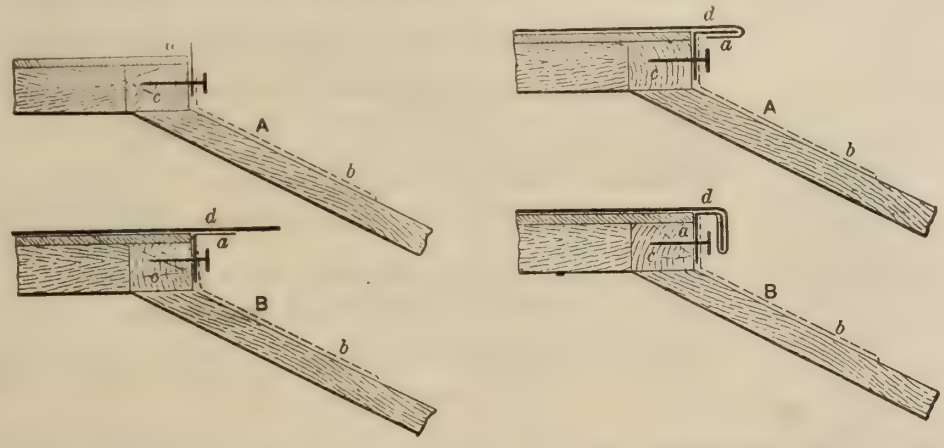


Fig. 5 and 6.
"Drip" for Patent Roll Cap.



Figs. 7 and 8.
Method of Treating the Edges of the Zinc in Covering "Flats" or Platforms.

The better class of mills in the country, those which expect to stay somewhat permanently in one place, have, during the prosperous times of the past decade, been getting more attention in the way of better roofing. Sometimes it is iron, sometimes it is tar paper, or something on that order.

For fire protection an iron roof is probably the best, but this is about the only point in which it has an advantage over composition roofing. There is a cheap iron roofing made with corrugated iron on sheathing strips, put 2 to 4 feet apart, which is an improvement over the old plank roofing, but really is not a satisfactory roof to put over machinery, nor over a lumber shed, for that matter. Its main redeeming qualities are its cheapness and the protection it offers against fire from the outside. After this is said in its favor, it is in order to say that it is difficult to keep such a roof from leaking. It does not leak as badly as a plank roof, but it does spring leaks, and when a leak through an iron roof of this kind strikes lumber it makes a stain. Another objection to it is the heat. There is nothing can get much hotter than an iron roof under a summer sun, and when a man has to work up near the roof it is decidedly uncomfortable. The same applies to a certain extent in the use of iron roofing where it is laid on solid sheathing. This is a better roof, and likewise a more expensive one, than the corrugated iron laid with only a little sheathing; but when it is hot the metal being in large units it has a tendency to writhe about under the expansion of the summer heat, and through this expansion and the contraction which comes with cooler weather it quite frequently springs leaks.

A better metal roof would be one made of metal shingles, because then you can get the metal on in smaller units, and when one is properly laid it is no more likely to spring leaks that any shinble roof, for there is room between the joints to take care of the expansion and contraction. This should be a good roof for permanent mill buildings where metal is desired for protection against fire, and where the building is such that the roof can be made of something like the same pitch as is used in regular shingle roofing.

While admitting the advantages of metal as a protection against fire, and the further fact that lots of composition roofing, while it won't start from sparks, will burn readily when a fire is once started, I am still of the opinion that the best mill roof, generally speaking, is one made of a composition of paper, resinous matter and gravel. There is a great variety of this class of material offered, and it would be difficult to outline the merits of each and determine with accuracy which is the best. There are probably many of them that are not nearly as good as the claims made for them, but some are undoubtedly beter than others. These are matters, however, that each man can look into for himself, if he will go at the matter in the proper manner, and remember in this, as in other things, that the first cost is not the only thing to be considered. A roof, once properly laid with material of this kind, turns water well, is cooler than an iron roof, and calls for less attention in the way of repairs; it should have some, of course—should be looked after every year—but it will generally be found easier to keep such a roof in repair than to keep one in repair made of metal, unless it is made of metal shingles.

One mistake some people make in the use of composition roofing containing resinous matter, is in putting it on a steep roof, something like what would be framed up for shingles. At first flash one might think that a good idea, and the steeper the roof the better, no matter what kind of roofing is used, because it sheds the water more rapidly and prevents accumulation during the hardest kind of rains. The trouble is, the use of composition roofing in this way not only interferes with putting on a protecting coat of sand and gravel after the roof is laid, but when the sun shines hot in the summer the resinous matter tends to melt and run off where the roof is steep, so that after a roof has stood through a summer it is considerably damaged. Now, take the same roof almost flat, and even though the resinous matter

may become almost fluid under the heat of the sun, it does not run off, but stays in place and solidifies again when it becomes cooler. Also, when the roof is flat you can put additional resinous matter and sand or gravel on top, and this, too, helps keep the mass intact when the summer sun warms it up. It may get a little soft, but it won't run off if the roof is flat; whereas, if put on a steep roof, it will gradually streak down, and quite a lot of it drip off. There is, of course, such a thing as making a roof too flat, so that when extremely heavy rains come, the roof is sometimes converted into quite a heavy pond of water; but there is a happy medium and lots of latitude to work on, and you can make a roof with pitch enough to take care of the water, and still have it flat enough that it will hold sand and gravel readily, so the resinous matter will not run off during hot weather. That is, in my mind, the ideal factory roof—a comparatively flat roof made of composition, and well protected with resinous matter, and more room in the mill, and is, withal, a fair protection gravel. It is a better water shed, it is cooler, it guards against fire.

AMERICAN CAPITAL FOR ONTARIO DEVELOPMENT.

Certain American capitalists have been so impressed with the possibilities of the district between the Muskoka Lakes and Sudbury that they are going to invest several million dollars in mineral development and in the erection of pulp mills. They are confident that the spruce forests in this region can permanently supply a number of the largest mills. L. O. Armstrong, colonization and industrial agent of the C. P. R., was recently in Chicago conferring with the promoters of the project, it being understood that initial steps towards the establishment of these important industries will be taken in the spring.

NEW INSPECTION RULES FOR HARDWOOD LUMBER.

(Continued from Page 20)

identical respectively with the American grades of one's and two's, No. 1 common, and No. 2 common, as expressed in the current rules of inspection of the National Hardwood Lumber Association, which came into operation on December 1, 1905.

(3) Thicknesses shall be taken to eighths inch in sizes of 3-4 inch and under for rough and 7-8 inch and under for planed lumber, to quarter inch in sizes of 1 inch to 1 1-2 inch, and to half inch in sizes of from 1 1-2 inch and upwards, thicknesses to be taken a foot from the thinnest place.

(4) Tapering lumber shall be measured for width at 2 feet from the narrowest end for 10 feet and up long, and at 1 foot from the narrowest end for under 10 feet long.

(5) In the case of consignment parcels, all split or damaged lumber to be measured and go with the rest of the parcel, no allowance to be made for splits or defects. In the case of contract parcels, no allowance to be made for splits or defects, but all lumber split or damaged (in excess of what is permitted in the several grades by the inspection rules of the National Hardwood Lumber Association, which came into operation on December 1, 1905) is to be laid aside and sold separately on its merits at extreme measure.

(6) The lengths of lumber measured by the "American board measure rule" shall be taken to the full foot, odd inches in lengths in all cases being taken back to the foot below. All lumber to be contented to half superficial feet. All fractions of less than half a foot to be dropped.

(7) The above rules and regulations to come into operation under all contracts made on and after January 1, 1908.

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Guy H. Moulthrop, Bay City, Mich.
President Moulthrop Lumber Company, John Island and Little Current, Ontario

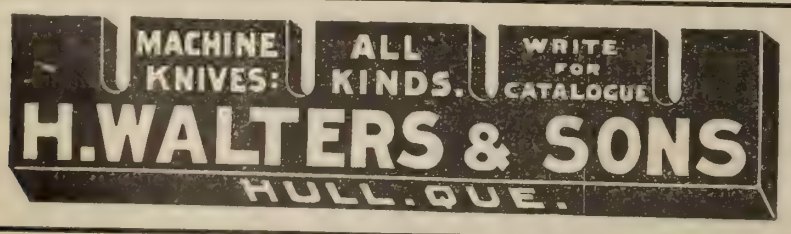
Henry J. Pierce, Buffalo, N. Y.
President International Traction Company
President Netherlands Tramways Company

Clark L. Ring, Saginaw, Mich.
Of Merrill & Ring, Duluth, Minn., and Seattle, Wash.

Dwight J. Turner, Toronto, Ontario
President Turner Lumber Company, Toronto, Midland and South River, Ontario

Guy White, North Tonawanda, N. Y.
Of White, Frost & White

R. SPENCE & CO.
Beech File Works.
HAMILTON, ONT.
FILE AND RASP MANUFACTURERS AND RE-CUTTERS
A trial order solicited. Write for price list and terms.
C. P. MOORE, PROPRIETOR.



FOR SALE

200 M 1 x 4 and up Spruce Boards
100 ,, 2 x 4, 2 x 6, 2 x 8 Spruce
500 ,, Pine, 1 in., 1½ in. and 2 in.

APPLY TO
THE J. B. SNOWBALL COMPANY, LIMITED
CHATHAM, NEW BRUNSWICK

THE WESTERN LUMBER CO.

633 Hastings St. - VANCOUVR, B. C.

WHOLESALE DEALERS IN
COAST LUMBER and SHINGLES - TIMBER LANDS

Wanted and For Sale Department

PUBLISHERS' NOTICE

Advertisements inserted in this department at the rate of 15 cents per line each insertion, payable in advance. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. Fourteen lines make one inch Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue

FOR SALE

ABOUT 100 M. PINE—ABOUT 1/5 WHITE pine—can be cut to order. Write for particulars. S. SMITH, Silver Hill, Ontario

WANTED — TEN THOUSAND CORDS Hard and Soft Wood ; also same quantity of Slabs. SIMCOE WOOD AND LUMBER CO., 52 Yonge Street Arcade, Toronto.

WANTED—6/4" AND 2" C. & B. BASSWOOD, Black and White Ash, Rock Elm and Beech; 1" and 5/4" Cull Basswood and Spruce 2½" Birch, 12 x 13 and 14 and up Soft Elm C. & B. R. E. KINSMAN LUMBER CO., Limited, Hamilton, Ontario.

FOR SALE

WHITE AND RED OAK PLANK, ALSO several carloads of oak squares, running from 18 in. to 8 ft long. Address Box 451, Woodstock, Ontario.

WE HAVE FOR SALE A FEW CARS OF cedar posts and shingles, pine lath, clear face and better red pine and a good quantity of white pine and spruce lumber. JOHN HARRISON & SONS CO , Saw and Planing Mills, Owen Sound, Ont.

HAVE YOU ANY STOCK YOU WISH TO SELL? If so make the fact known to probable buyers by placing an advertisement in the "Wanted and For Sale Department." Address CANADA LUMBERMAN, Toronto.

A CROWN LAND SURVEYOR AND Lumber Cruiser of long experience wants to be placed in touch with parties who are desirous of investing in lumber lands in Alberta or British Columbia. Can furnish good references Address Timber, care CANADA LUMBERMAN, Toronto.

Wanted

ONE TO TWO MILLION FEET WINTER cut Basswood. Sawing specification furnished upon request. Apply BOX 555, CANADA LUMBERMAN, Toronto.

FOR SALE

I AM PREPARED TO DELIVER F.O.B. cars here 2,000,000 feet cedar logs cut to order into any size timbers from 4" x 4" to 12" x 12", and from 8 to 20 feet long, any time up to next May; 3,000 telegraph poles. Correspondence solicited. J. B. WINLAW, Winlaw, B. C.

FOR SALE

LUMBER YARD AND OFFICES AND FIXTURES of a Wholesale and Retail Lumber Business in a first class town. This is a first class going concern of old established business and in one of the best towns in Ontario, enjoying a good farmers' as well as town trade.

Reason for selling is to go to British Columbia to operate Timber Limits secured there.

For information inquire at BOX 553, CANADA LUMBERMAN, Toronto.

FOR SALE

A GREAT MANUFACTURING SITE FOR Pulpwood Mill or large Saw Mill; with excellent large water power already developed. Also complete saw mill and planing mill with about four million feet of lumber, shingles, lath, dressed lumber. Complete outfit of Lumber Camp for about one hundred men; and the most attractive town site in New Ontario. Situated in the Town of Charlton. Good time to get at bottom price. Apply Box No. 1, New Liskeard, Ont.

LUMBER BUSINESS FOR SALE

THE EXECUTORS OF THE ESTATE OF the late W. H. Crow of Welland, Ont., offer for sale the lumber and coal business lately carried on by him. This is without doubt one of the best opportunities to secure a live going business. The Town of Welland is growing rapidly and the outlook for trade in the Town is very bright. This yard has done a large proportion of the trade of the Town. The stock on hand is well sorted and well bought and amounts to about $20,000. Intending purchasers will be given every chance to satisfy themselves as to the amount of business that has been done and the value of the stock on hand. Address all communications to GERMAN & PETTIT, Solicitors for the Executors, Welland.

WANTED

CASH PAID FOR BASSWOOD, ASH, PINE and hemlock and other lumber. Send list of what you have and prices to Box 551, CANADA LUMBERMAN. Toronto.

POSITION WANTED

AS SUPERINTENDENT, MANAGER, woods or sawmill, accountant, timber cruiser, or scaler. Practical experience in every detail of lumbering operations. Best of reference. Address Box 557, CANADA LUMBERMAN, Toronto.

SAWING CONTRACT

WE ARE OPEN TO CONTRACT FOR CUTting of lumber by the thousand in any quantity from one million to one hundred million feet.

SOUTH RIVER LUMBER COMPANY, Limited
South River, Ont.

8,000 Acres of B.C. Timber

LANDS FOR SALE COMPRISING CEDAR, fir, Spruce, Cypress, situated 100 miles from Vancouver, easily logged by lake and river to salt water. Writer owner, W.A.SIMPSON, 744 Davie St., Vancouver

FOR SALE

VALUABLE PINE TIMBER LIMITS IN District of Algoma, all tributary to Georgian Bay. Also good modern band saw mill, with necessary dwellings, &c., situated near the mouth of Spanish River on Georgian Bay. The above will be sold in bulk or separately. Terms of payment very moderate to suit purchasers.

For further particulars apply to
NIPISSING LUMBER CO , Ltd.
Hamilton, Ont.

FOR SALE

Pair 30" "Victor Turbine," horizontal setting.
48" "Victor Turbine," vertical, with harness.
54" "Dominion Turbine," same.
44" "Little Giant Turbine," same.
4" and 5" Shafting, Dodge Frictions, Face Coupling, Steel Rim Pulleys
2 Set Waterous Belt Tighteners.

All second hand, in good condition, cheap for cash.

Address P. O Box 297, St. Catherines, Ont.

TENDERS FOR

Pulpwood Concessions

TENDERS WILL BE RECEIVED BY THE undersigned up to and including the 16th of December next for the right to cut pulpwood on certain areas tributary to the Nepigon River, in the District of Thunder Bay, and Rainy Lake, in the District of Rainy River, and make the same into paper. Tenderers should state the amount they are prepared to pay as bonus in addition to such dues as may from time to time be fixed for the right to operate a paper making industry on the areas referred to. Separate tenders must be made for each area or territory, and the successful tenderers will be required to erect a mill or mills on each of the territories or in such other localities as may be approved by the Government of Ontario.

Parties tendering for the pulpwood rights shall accompany their tenders with a marked cheque for 25% of the amount tendered, payable to the Treasurer of Ontario, and to be forfeited in the event of their failing to enter into agreements to carry out conditions, etc.

With respect to the Rainy Lake Pulp Concession, tenderers will be required to make a tender for the right to cut the pine, tamarac and cedar on the territory offered. Parties making tender for these timbers to state the amount they are prepared to pay per thousand feet B.M. as bonus in addition to Crown dues of $2 00 per thousand feet B M A marked cheque for $5,000 00 payable to the Treasurer of Ontario, must accompany the tender for pine timber, and to be forfeited in the event of their failing to enter into agreements to carry out conditions etc.

No timber shall be cut on either of the Concessions of a less diameter than 9 inches, 2 feet from the ground.

The successful tenderers to enter into agreements with the Government for the erection of the mills, expenditure of money etc.

For full particulars as to the conditions, etc application should be made to the undersigned.

HON. F COCHRANE,
Minister of Lands,
Toronto, Oct. 16th, 1907. Forests and Mines

N. B.—No unauthorized publication of this notice will be paid for.

FOR SALE

2,000,000 FT. WHITE AND RED PINE AND Spruce; 500,000 Laths. P. O Box 25, Chapleau, Ontario.

WANTED

TO CONTRACT FOR SAWING THREEquarter million at Ancaster. Address, Box 31, Jordan Harbor, Ont.

BUY B. C. TIMBER

358 MILLION FEET OF TIMBER, FIR, CEdar, Spruce and Hemlock. Easily logged to tide water, Cruisers' Estimate, 20,000 ft per acre. Price $26,000. Apply W.H. LEMSKE, P.O. BOX 972 Vancouver.

YOUNG LUMBERMAN

KNOWING THOROUGHLY THE WORK of woods, mill, yard and office up to general superintendent, wishes position either on salary or share of profits, married: wide experience: now employed as general superintendent. Address Box 542 CANADA LUMBERMAN, Toronto.

FOR SALE

CORLISS ENGINE, FROM 300 to 400 H P.; all complete; used less than one year. Will sell at a bargain. Apply Box 554, CANADA LUMBERMAN, Toronto.

FOR SALE

20 SETS LOG SLEIGHS, WITH CHAINS.
15 sets double harness,
80 pair of blankets,
Cookery for one large camp,

And an assorted lot of blacksmith and lumbering tools.

The sleighs, harness and blankets are all practically new, having only been used one and two seasons. For price apply to
MASON, GORDON & Co., Montreal, Que.

FOR SALE

TWO MILLION FEET HEMLOCK ON shore of Georgian Bay from 10 to 26 feet long. State highest price delivered in booms. Address, A. B. CANADA LUMBERMAN, Toronto.

LUMBER WANTED

WE WANT 100 CARS OF LUMBER EACH week to Dress and Match, resaw, make into flooring, in transit We have the best American Machinery, and guarantee satisfaction. FAIT-CARSS LUMBER CO , Orillia.

For Sale

SAW MILL AND ABOUT 45 ACRES OF good Timbered bush, also lath and shingle machine, capacity 10,000 per day, within 2 miles of C.P R. and 4 miles of G.T.R. stations. Apply to J. D. GREENLEES, Alliston.

For Sale

150 green White Oak Piles.
1 car load Hard Maple and Beech squares.
Dry clear stock cut 1½" and 2", 20" to 4 ft. long.
1 car load 1½" and 2" Elm C. & B. dry stock.
P. D. CAMPBELL, Northwood, Ontario.

MACHINERY FOR SALE.

20 H. P. ENGINE AND 25 H. P. BOILER stationary, full front and 50 feet stack. One 12 H.P. Waterous Gasoline Engine, nearly new. One 24 inch Goldie & McCulloch Planer and Matcher. One Hay Press, will sell cheap or trade for Lumber. Write to Friesen Bros., Steinbach, Man.

FOR SALE
AT MIDLAND, ONT.

416,000 ft. 4/4 x 4" and up, Common White Pine.
20,000 ft. 5/4 x 4" and up, " " "
41,000 ft. 5/4 x 4" and up, No. 1 Mill Culls White Pine.
45,000 ft. 8/4 x 4" and up, No. 1 Mill Culls White Pine.
925,000 ft. No. 1 White Pine Lath, 4 ft.
425,000 ft. No 2 " " " 4 ft.
360,000 ft. No. 3 " " " 4 ft.

Your inquiries solicited.
MERSHON, SCHUETTE, PARKER & Co.,
Saginaw, Mich.

FOR SALE

COMPLETE OUTFIT OF MODERN machinery for the manufacture of
Hardwood Flooring.
Beliot Pattern Flooring Machine.
Hoyt Pattern Matcher.
Fay Egan Double strip surfacer and planer.
Fay Egan Band Rip Saw machiner. 4" saws can also be used as re-saw.
Sherman End-Matcher and Boring machine.
Broken Roll Single Surfacer.
Buzz Planer, Turning Lathe, Etc.

All the very latest style of tools and in good order Practically new. Apply to J. S. FINDLAY, Owen Sound, Ontario.

WHITE BIRCH OR POPLAR SQUARES from ½" to 2" diam. any length. H. M. CARRUTHERS, Quincy, Mass.

SOFT ELM AND PASSWOOD WANTED

150,000 FT. [illegible] for immediate shipme[illegible] LUMBERMAN, Toronto.

FOR SALE

A thoroughly well equipped band, circular and gang mill, run six seasons only. Located at Sarnia, Ont. Can be shipped by rail or water.

Will sell any part of equipment to suit purchaser.

The machine equipment is as follows:

8 72" x [illegible] tubular boilers, in three batteries, with three independent stacks and all fixtures.
1 12" x 7" x 10" Worthington duplex pump.
1 22" x 42" slide valve engine.
1 20" x 24" slide valve engine,
1 heavy log haul-up rig, with about 300' of chain.
2 three-arm Garland log kickers.
1 four-arm Kline log stop.
1 three-arm Kline log stop.
2 Garland steam niggers.
1 R. H., 52" Watrous three-block carriage, with fourth block on trailer.
1 8' by [illegible]" Watrous R. H band mill.
1 10" x 42" shotgun feed.
20 10" x 24" iron live rolls.
4 10" x 36" iron live rolls.
8 10" x 3[illegible] iron chain driven rolls.
1 two-arm steam cant flipper.
1 52" L. H. Watrous four-saw edger.
1 R. H., five-saw 16' table slasher.
1 heavy carriage cut-off saw for timbers.
1 L. H., [illegible]-block 40" Garland circular carriage.
1 Kilgo[illegible] cushion buffer.
1 L. H. Stearns iron frame circular husk.
1 9" x 48' shotgun feed.
21 10" x 24" iron live rolls.
5 10" x 24" iron live rolls
1 52" Munn four-saw edger.
1 two-arm steam cant flipper.
1 L. H , five-saw slab slasher.
2 lumber trimmers.
1 44" L. H. Wickes gang.
21 6' wooden chain driven rolls in rear of gang.
1 L. H. Garland four-saw lath bolter.
1 Stearns five-saw L. H. lath machine.
1 adjustable length lath trimmer
2 single length, 4' lath trimmers and binders.
1 No. 4 Mitts & Merrill hog
1 Rogers 27" automatic knife grinder.
1 Covel automatic circular saw sharpener.
1 Rich 12" lap grinder.
1 pair Rich band saw stretching wheels,
1 48" gang saw clamp
1 hooded band saw forge.
1 B. T. & B. automatic band saw sharpener with floor stands.
1 52" band saw filing clamp
1 Rich movable roll band saw stretcher.
1 10" x 13" x 5" anvil.
1 78" x 9½" band saw hammering plate.
4 band saw stretchers with rolls and nine floor rolls.
1 6" x 11" x 12" saw anvil.
1 12" shear.
1 Covel-Kinney saw swage.
1 Hart Emery Wheel Co. saw sharpener.
1 12" Rich band saw brazing clamp.
1 Covel automatic gang saw sharpener.
1 Wickes screw punch gummer.
1 Wilkin gang saw stretcher
1 10" x 6" x 6½" anvil.
1 27½ K. W., 550 light, 110 volt, multipolar generator, with switchboard and instruments.
1 12" x 16" R. H , box bed slide valve engine.
1 10" x 10" Smalley R. H , engine driving dynamo.
1 wooden frame rip saw, top 52" x 48".
1 shingle mill haul-up rig.
1 drag saw, belt drive.
1 knee feed bolter.
1 Hall No. 6 shingle machine.
1 double knot saw.
1 63" rotary saw.
1 shingle band cut-off and rip saw.
1 Hart emery wheel shingle saw sharpener.
1 shingle bolt elevator.
1 blacksmith's outfit.
1 7" blacksmith's vise.
1 lot brick.
1,200 ft. 2½" hose.
1 steel roof for boiler house, including steel trusses.
1 Greenwood heading turner.
3 wood frame shingle packers.
1 42" six-knife wheel jointer.
Large lot of band and circular saws.
A number of shovels and tools.

We also have a large quantity of tee rail, tram cars, dump carts, tram timbers etc., which, like the mill building, can be had with machinery, or will be sold separately.

All shafting, pulleys, boxes, gears and belting used to drive the foregoing machinery; an exceptionally fine lot of riveted carrier chain for sawdust and refuse.

We invite the closest inspection of this material, knowing that it will prove satisfactory to the most critical buyer. The mill frame, roomy, heavy and well-built, can be had with the mill machinery if desired.

WICKES BROTHERS,
Saginaw, Mich.
Seattle Office,
412 Oriental Bldg.

FOR SALE

100 CARS NO. 1 TIMOTHY HAY IN LOTS TO SUIT. C. ANDERSON, & Co., Forest, Ontario.

WANTED POSITION AS MANAGER OF lumber business thorough experience from the stump to consumer, in every branch. Best of references. BOX 345 CANADA LUMBERMAN, Toronto.

FOR SALE

AT SPECIAL PRICE, a car of 1" and 2" birch, one car of 1" soft maple. A. P. EBERT, Wiarton, Ont.

FOR SALE AT SOUTH RIVER, ONT., about 600,000' of Hemlock, say 70% 2" also about 100,000' of Birch, principally 1" and 2", and some Spruce 1" and 2". THE ROBB LUMBER CO., Ltd., Guelph, Ont.

POSITION WANTED

A FIRST CLASS HARDWOOD LUMBER Buyer, Salesman and Inspector, Practical and experienced, open for engagement 1st of January next—A.1. reference. BOX 558, CANADA LUMBERMAN, Toronto.

FOR SALE

IF YOU WANT RED PINE PILES OR round timber write to us. We can supply them from 40 to 60 feet long. Address LINSDAY & MOHR, Wilno, Ont., G.T.Ry.

WANTED

5 CARS WHITE CEDAR PICKETS, ROUGH not pointed, equal amounts of ½" x 2"—3', 4' 5'. Also 18" cedar shingles. Quote price on car naming shipping point. C. A. LARNED, Phoenix N.Y.

For Sale

1 car 1 inch Soft Elm C & B.
1 " 2 " " " Common.
1 " 1 " Black Ash C & B.
1 " 1 " Maple C & B.
W. H. CUSTIS, Kettleby, Ont.

WANTED

FOR IMMEDIATE DELIVERY 4 CARS winter cut white basswood 1s and 2s, 3" and up wide 4 ft. and up long. Highest cash price paid. Send statement of quantity you have and where located to ROBERT BURY & Co., Lock BOX 268, Teeswater, Ont.

FOR SALE

GOOD LUMBER YARD AND PLANING Mill in one of the best Towns in Western Ontario. Old established business, only one other concern in the Town. The above concern has an annual turn-over of about $30,000. Will sell Mill and Yard together or separate. Good Railway connections, 3 Railroads, one running through the Yard. Steam and Electric power in Planing Mill. For full particulars apply to Box 384, Woodstock, Ontario.

TENDERS FOR TIMBER.

F. C. Gamble, Public Works Engineer, Victoria, B.C., invites tenders up to December 31st for supply and delivery of some six hundred fir and cedar piles, varying from twenty to forty-five feet in length, to be used in the construction of the North Arm bridge, Fraser river.

Tenders are invited by the Quebec Harbor Commissioners up to January 2nd for supply of square spruce and three inch deals. Further particulars of James Woods, secretary-treasurer.

Current Trade Conditions

ONTARIO.

With the close of the year the stagnancy in the lumber market has reached its climax. Not in lumber alone is this the case, but in all classes of building material there is a decided lack of tone, accompanied by a belief on the part of the consumer and retailer that prices will drop. That this is a forlorn hope in the case of lumber is proven by the persistency with which the strong quotations of the past summer have been given and adhered to up to the present. Now comes the announcement that a tacit understanding has been reached by a number of the larger wholesalers by which no lumber will be pressed upon the market for the next three or four weeks, after which time some revival of trade may reasonably be expected. That such a course is possible is a striking proof of past growth and present standing of the industry. A few years ago such a season of slack demand and money scarcity would long ere this have broken the market, but stocks are now in too strong hands to permit of this.

Moreover, retailers have of late had too much opportunity of entertaining the knights of the road with refusals to buy and very naturally have come to the conclusion that there is lumber and to spare in the wholesale yards which might as well lie there as anywhere else. There are many indications, however, that more lumber will be required in the cities during the early weeks of the new year. On account of the surplus of labor, municipalities are taking steps to furnish employment for unskilled labor by undertaking operations which would otherwise be held over till spring. This will necesitate a call for building material and will somewhat ease the city yards. There seems little hope, however, that the rural demand will improve for some weeks yet.

Prices continue unchanged in all lines. There is some individual invoice shading, but quotations are firmly adhered to as a general thing. British Columbia shingles are difficult to procure in Ontario. Everything taken into consideration, there is some reason for concern as to how orders for almost all ordinary lumber can be filled next season, as reports from the logging centres show even a closer curtailment in the pine and hemlock cut than was announced earlier in the season.

EASTERN CANADA.

The outstanding feature of the lumber trade in the Maritime Provinces is the decided local effect of the financial stringency in the New York and Boston markets. Perhaps the most conspicuous example is to be found in the case of spruce lath, of which very little is offering. On the other hand, dealers and manufacturers are enabled to act somewhat independently in regard to this line, owing to the lightness of stocks, the total of which in St. John would not exceed four and one-half to four and three-quarter millions. A prospective buyer would no doubt be quoted in the vicinity of $2 per thousand for dutiable lath. At the same time there is a strong probability that these quotations would have to be shaded a trifle in order to effect a sale.

A more optimistic feeling in regard to spruce deals for export to Great Britain is apparent in local lumber selling circles. This is caused chiefly by reports from the chief distributing centres that this line of goods has shown a change for the better recently. On the other hand, it is felt that greatly improved prices can not be expected until buying for the spring trade has begun. Probably such lots as will go forward by the winter liners will be placed at slightly better figures than have been the rule for some months past, seeing that the buying of such lots coincides well with the hand-to-mouth policy so conspicuous in the buying at present. On a specification containing, say, 50 per cent. 7's and 8's, 37 1-2 per cent. 9's and balance 11's and wides, quotations could be obtained at $12.50 per thousand superficial feet, f.o.b. St. John.

WESTERN CANADA.

Continued cold weather throughout the Canadian West has somewhat stimulated bush operations. Keen frost for the past two months has made the bottom perfect, while the early arrival of snow has afforded an opportunity to lumbermen of getting in supplies on sleighs. In spite of favorable weather conditions, however, the logging situation is in an unsatisfactory state. Hundreds of foreign laborers have crowded into Winnipeg looking for work, with the result that much undesirable help is employed at wages which average $10 a month less than at a similar period last year. The policy of cutting down the output of logs during the coming winter is being closely adhered to. In the meantime the amount of stock changing hands is small indeed, although nominally prices remain unchanged.

THE UNITED STATES.

Some improvement has been evidenced in the northern pine market recently and a number of large orders have been placed at prices which dealers say are being more satisfactorily sustained than are those of any other soft woods. Orders from the country are also coming in more freely. On the other hand comparatively few orders for hemlock are being received, although there seems to be a better feeling as regards the future of prices, although still retailers show no desire to stock up. Moreover, while the base price is officially recognized, large buyers have no difficulty in purchasing lower. Buffalo reports state that as Pennsylvania hemlock becomes scarcer more of it comes from the north and west, while prices have remained unprecedentedly firm.

McPHERSON & FULLERTON BROS.

Timber and Real Estate, Victoria, B.C.

27 miles Cedar and Spruce, will cruise twenty thousand to acre or better. Price $2.50 per acre.

45 miles on Skeena, will cruise fifteen thousand feet to acre. Price $1.25 per acre.

If you are interested in timber write us. Correspondence solicited.

We have for Sale

BRITISH COLUMBIA SHINGLES

Apply to

LESLIE & CRAWFORD

Vancouver, B.C.

DRY STOCK READY FOR QUICK SHIPMENT

12 cars 1 x 18 to 23" panel and No. 1 Poplar.
6 " 1" 1st and 2nds Poplar.
6 " 1" No. 1 common Poplar.
6 " 1" No. 2 " "
8 " 1" mill cull Poplar.
2 " 1 x 18 and wider panel and No. 1 Cottonwood.
5 " 5/4 No. 1 common Cottonwood.
5 " 1 x 13 to 17" box boards Cottonwood.
20 cars 1 x 8 to 12" box boards Cottonwood.
19 " 1 x 13 to 17 1st and 2nds "
21 " 1 x 13 to 17 No. 1 common "
20 " 1 x 6 to 12" 1st and 2nds "
15 " 1 x 4" and wider No. 1 common Cottonwood
20 " 1 x 4" and wider No. 2 " "
15 " 4/4 1st and 2nds plain red or white Oak.
24 " 4/4 No. 1 common plain red or white Oak.

AMERICAN LUMBER AND MANFG. CO., PITTSBURGH, PA

Cedar Posts Wanted

WANTED—40,000 Cedar Fence Posts, 5 inches and up at Top, and 8 feet long, Peeled. Must be sound quality and straight.

Quote lowest price F. O. B. Cars, Terms Cash, less 2 per cent.

C. A. LARKIN **Toronto, Ont.**

Timber Limits For Sale

Spruce, Pine, Cedar, Hemlock

and other Timber Limits.

FINEST TIMBER SPLENDID LOCATION

PARTICULARS ON APPLICATION TO

CANADA MINERALS, Limited

75 Yonge Street, - Toronto

In the New York markets there is not much activity in Eastern spruce. Arrivals are light, but quite sufficient to satisfy all local demands. Opinion seems divided regarding the future of prices. Some dealers are of the opinion that prices next spring will be even lower than at present, but this view is denounced by the majority in view of the curtailment in the cut for the coming winter.

Cutting of prices as a result of the cancellation of heavy orders has, it is said, had a bad effect on the Chicago hardwood market. Many carloads of lumber which had been shipped before cancellations were received by the manufacturers have been unloaded at prices which, although bringing about their immediate sale, have not helped the market in the least. The more conservative hardwood dealers believe that this cutting of prices is the worst thing that could happen at this time, as it is almost universally conceded that if manufacturers would hold on to their lumber for from thirty to sixty days they would be able to get full list for it.

Great Britain.

Trade in lumber is of the quietest character. Consumers still hold off making purchases, not so much in the hope that they will buy better later on as owing to the fact that the New Year is close at hand. Although spruce is a wood which usually fills the pinch of a financial stringency, it is satisfactory to record that the recent rise has been sustained and even higher bids have been elicited for the few cargoes being offered. For a steamer cargo loading at St. John, N.B., an offer of £7 10s. was declined, the shippers hoping to do much better before the vessel arrives at a port of call for orders.

The last steamers from Montreal left on November 23. All their 3rd and most of their 2nd quality pine was already sold, and, with the exception of sidings and boards, the cargo passed direct from the quay into consumption. Old country buyers realise that with the opening of spring trade prices for all pine stock at Ottawa will have risen. Very little interest is taken in pitch pine, although the market is slowly righting itself.

QUEBEC CULLER'S STATEMENT.

The comparative statement of timber culled to December 4 is reckoned by the supervisor of the culler's office, Quebec, as follows:

	1905 Cub. ft.	1906 Cub. ft.	1907 Cub ft.
Waney White Pine	1,210,920	676,600	1,139,960
White Pine	137,440	76,720	136,200
Red Pine	1,200	13,400	8,400
Oak	193,920	578,120	404,160
Elm	484,720	602,160	212,360
Ash	10,440	8,880	25,880
Butternut	120		
Birch and Maple	207,640	158,400	82,200

Following is the comparative statement of lumber shipments from the port of Montreal to European points, Messrs. Watson & Todd, who showed the largest shipments for 1906, again take the lead. It will be noted that a considerable falling off has taken place in the present year's shipments as compared with those of 1906.

	1906	1907
Watson & Todd	35,020,488	30,284,451
J. Burstall & Co.	21,076,803	16,418,704
W & J. Sharples	19,092,240	7,475,163
R. Cox & Co.	18,377,415	18,775,867
Dobell Beckett & Co.	11,244,743	9,198,486
McArthur Export Co.	9,467,153	3,728,028
Cox Long & Co.	4,753,520	3,483,400
E. H. Lemay	3,030,000	3,649,686
	120,502,471 ft.	89,742, 775 ft.

A short time ago it was stated that the British Columbia mills were closing down owing to the gloomy financial aspect and to the depressed condition of the coast lumber business. This statement was recently refuted by A. B. Cowan, president of A. B. Cowan & Company, manufacturers, of Galt, Ont., while on a visit to Vancouver. Mr. Cowan reports that in six weeks his firm disposed of no less than $20,000 of wood-working machinery to lumber mills between Calgary and Vancouver. In addition to this machinery five 25,000 pound timber planers had also been purchased. On his trip to Vancouver, Mr. Cowan noticed that Charles McNab, of Waldor, had just completed a large mill, and was now building for his company a big mill at Fernie and another at Cranbrook; John Dewar, of the Porto Rica Lumber Company, was building a large mill at Nelson; Mr. Patrick, of the Patrick Lumber Company, of Nelson, was erecting one of the largest sawmills in the interior, fifteen miles from Nelson; and Manager King, of the King Lumber Company, of Cranbrook, was making very extensive additions to his already large mill.

A. F. Holden, Pres. J. M. Diver, Genl. Mgr
F. H. Goft, Vice-Pres. E. C. Barre, Ass't-Mgr

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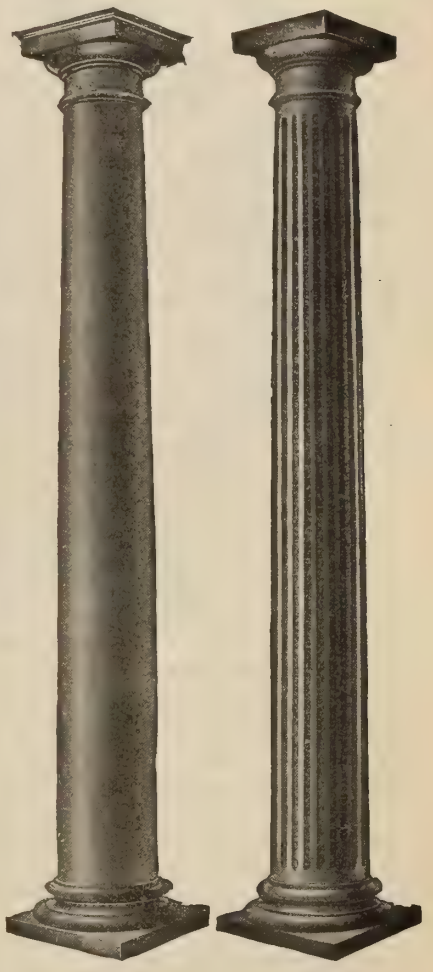

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MANUFACTURERS AND WHOLESALERS OF
LUMBER
SPRUCE - SPRUCE
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149 Broadway, NEW YORK

THE NEWS

The death is reported of Robert Graham, a well-known lumberman of Minden, Ont.

A new lumber yard will be opened up at Westfort, Fort William, early in the spring.

Joseph Bernia, a logger, whilst "swamping" at Palliser, B.C., was instantly killed last month in the fall of an immense spruce tree.

C. Y. Spring, of the A. J. Burton Saw Company, Limited, Vancouver, has started out on a trip east in the interests of his firm covering as far as North Bay, Ont.

The Canadian Supply Company, a new lumber, hay and grain firm of Montreal, Que., have registered; also the City Operating Company, general contractors, same city.

A large transaction was put through at Alert Bay, B.C., at the beginning of the month, when Senator Cox and John Charlton purchased the extensive timber lands of Kinman & Brophy for $200,000.

Rafting operations have been suspended for the season by the Restigouche Boom Company, Quebec. The amount of lumber rafted this year is 80,000,000 feet, which is 10,000,000 feet in excess of 1906.

Matthew Brown, one of the business pioneers of the West, died recently at Lethbridge, Alta. The deceased was prominently identified with the Rat Portage Lumber Company and other large concerns.

Senator T. O. Davis' saw mill, at a place called Seldom Seen, Sask., was totally destroyed by fire early this month. The police took up the investigation of the case, suspecting the fire to be of incendiary origin.

The lumber dealers of Woodstock, N.B., are discussing a proposition for the erection of a flooring mill. They are of the opinion that a great deal of their hardwood could be very advantageously turned into flooring.

At St. Patrick's logging camp in the Slocan, B.C., a young Englishman named Frederick Beard recently met his death. He slipped on the skidway as a log was being launched and was terribly crushed by the falling timber.

The Port Arthur City Council are said to be negotiating with a pulp and paper company, the identity of which is not announced, with a view to the erection here of mills which will have a capacity for fifty tons of paper each day.

J. R. Booth, the well-known lumber manufacturer of Ottawa, is anxious to restrain the liquor business in the neighborhood of his mills at the Chaudiere and has offered to give the City Council a recompense of $2,000 for any loss they might sustain in withholding the licenses.

Something quite unique is being provided by several American lumber dealers at Lynn Creek, B.C., where they are preparing to put an electric locomotive into use on their new roads. It is stated that this will be the first electric line to be constructed on an American logging road.

While staking timber at Sproat Lake, B.C., a short time ago, a timber cruiser named Muller came across a pair of rubber boots behind a fallen log. Further investigation disclosed the remains of one John Feurst, a demented being who disappeared from his home in Alberni several years back.

The Peterborough Lumber Company report a very busy season during the past year. The total cut was seven million feet and operations continued without interruption from April 14th to November 29th. Many of the employes will spend the winter in the woods, and it is expected that about six million feet of logs will be taken out for the coming year.

J. R. Mitchell, a member of the firm of Edmiston & Mitchell, timber brokers, of Glasgow, Scotland, was recently in Vancouver. He stated that during recent years England had been overbuilt, and this cause, taken in conjunction with the depression of the shipbuilding industry, was accountable for the restricted use of lumber in Great Britain at the present time.

The amount of timber lost by fire in the British Columbia forests has been less during the past season than in any previous year, according to the reports of the fire wardens. This is accounted for by the organized patrol of the woods and the more rigid enforcements of the regulations, which precautions have resulted in a saving of many thousands of dollars.

Many improvements will be made to the plant of the Fraser River Sawmills at Millside, B.C., during the winter months. A large quantity of new machinery will be installed and the storage facilities improved. The concern itself has been reorganized, with A. D. Macrae, of Winnipeg, as president, and F. H. Rogers as manager. One of the new directors is Peter Jensen, of Nebraska.

No better evidence of the growth and progress of the Maritime Provinces can be furnished than is provided by the Peel Lumber Company. At a place called Stickney Brook, N.B., they are building a regular village. In addition to a mill, which they erected at a cost of $20,000, several houses and a couple of stores have been constructed, and an aggressive building campaign is planned for the spring.

The Saanich Lumber Company, Limited, of Vancouver, B.C., have just installed a blower and separator system in their planing mill at Saanich. The equipment consists of a Columbia Blower Company separator and a single 70 inch Sturtevant fan. The work was done under the supervision of Wm. Murray, of the Columbia Blower Company. The Saanich Company have also installed two Jenkes boilers, thereby doubling the steam plant capacity.

Stringent measures are being taken by the Ontario authorities in order to prevent the Indians from smuggling liquor into the G. T. P. lumber camps. At Kenora, thirty gallons of spirits was recently seized and poured down the sewer. The most ingenious devices have been resorted to in this illicit trade. In the investigation which preceded the Kenora affair it transpired that kegs of whiskey had even been shipped to the lumbermen in barrels of apples and other stores.

From the wrecks of a recent log drive on the torrential waters of the Nimkish river in British Columbia a total of but 300,000 out of 2,000,000 feet of logs is reported to have been saved. The logs were cut on limits tributary to Nimkish Lake and were awaiting a flooding of the river, when enough water rushed through, according to our account, to float a billion logs. The Nimkish is well known to loggers and lumbermen as one of the hardest rivers to drive logs through in British Columbia, because of its narrow rocky canyons, and there are several places where hopeless jams are possible of occurrence.

Coincident with the sudden development of the west coast of Vancouver Island, caused by the projected extension by the C. P. R. of the Esquimault & Nanaimo Railway from the east coast to Alberni on the west coast, comes the announcement that three large lumber manufacturing plants will be erected at Alberni by the following companies:—The Red Cliff Lumber Company, which has for many years been manufacturing pine at Duluth, Minn.; the Alberni Mills & Timber Company, with head offices at present at Ballard, Wash., and the British Columbia Cedar Lumber Company, whose present head office is located at Everett, Wash. Sites for these different mill companies have been obtained from the C. P. R., and it is understood that present intentions are to commence the erection of these mills next year. They will all be of considerable capacity, their output averaging about 150,000 feet per day. They will go in for both the export and the rail trade, ocean-going vessels reaching Alberni by means of Barclay Sound and the Alberni Canal, while rail shipment would be transhipped across the Gulf of Georgia into Vancouver, thence east by rail. The companies also have an eye to the time when the Panama Canal will render possible quick cargo shipments to the Atlantic seaboard.

P. O. Box 994 - Phone 980

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Timber Broker

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Our stock is changing continually; the up-to-date Second Hand Machinery House of Montreal.

W. L. Miller & Co.
13-16-18 St. Peter St., MONTREAL

RESAWING MACHINE

As can be seen by the engraving, the frame is cast in one piece. The legs of cast iron are cast in one piece with the saw bench. This makes an extremely substantial machine.

The feed rolls 12" diameter are driven by cut gears 16" in diameter. The proportions of th gears are such as to give a powerful driving mechanism.

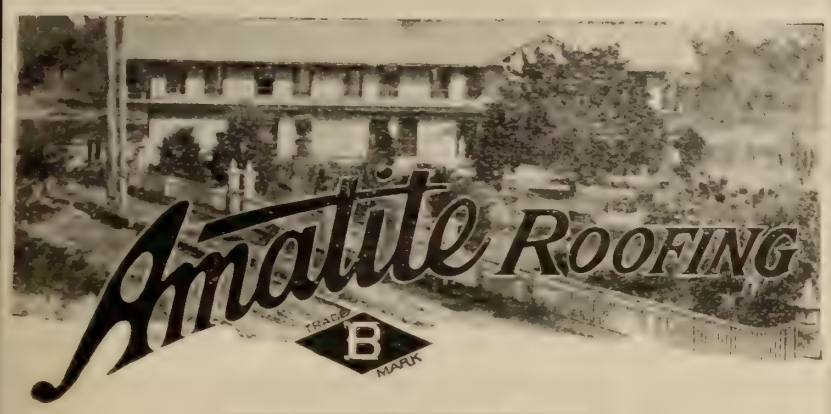
The arrangement to set the stationary roll (not shown in the cut) is very accurate, quick and reliable. The clear distance between the slides is 19."

The steam press is of improved construction and has a travel of 10"

The saw is 42" and saw arbor bearing is set in slide so that saw can be brought closer to the rolls, as it wears.

The weight of the machine is 3,000 lbs.

THE SAVOIE-GUAY COMPANY - Makers of Saw Mill Machinery PLESSISVILLE STATION, P. Q.



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The large and careful buyers such as big dairy companies and railroads, have found Amatite greatly superior to the "skin-coated" ready roofings. (The above view shows a railroad building—the depot at Orange, Texas, on the O. & N. R. R.—roofed with Amatite.) Saving the painting makes Amatite by far the cheapest roof made.

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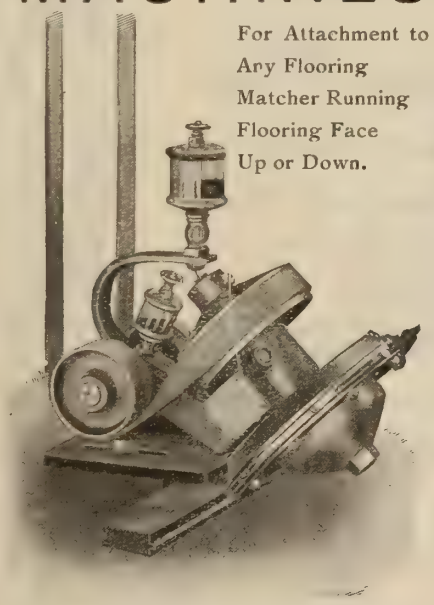

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Above cut shows machine boring flooring run face up. Our boring machines have been on the market for the past ten years and are well known to be the best machines on the market for their purpose Since fast-feed matchers have come into use, it may be said that they are the only boring machines that can be used as an attachment. They require no floor space and there is no extra cost for handling.

We make the
SHERMAN FACE BORING MACHINE
for attachment to any flooring machine, to bore jointed flooring.
We make also the
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Send in your prices to-day or write us for prices and booklet.

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Windsor, Ont.

SOAKING WOOD.

A question, highly important in the matter of seasoning wood, has just been settled after a long period of uncertainty and many careful experiments. It is found that the process of seasoning wood can be materially hastened by first soaking it. Up to this time opinion has been divided, and there were many supporters of the contrary view, that if suffered to lie in water for a certain period green timber underwent some change from the action of the water, which facilitated its drying, when afterwards removed and placed in the yard or in the kiln.

In reaching the conclusion that soaking has no appreciable effect in preparing wood for seasoning, the Forest Service worked up a large amount of data secured from the seasoning experiments which it has been conducting upon loblolly pine cross-arms, chestnut telephone poles, and hemlock and tamarack railroad ties. Incidently it was brought out that it doubtless pays to keep wood in water to prevent damage from checking and insects until it can be manufactured.

GREEN VS. FIRE-KILLED TIMBER.

Tests recently completed at the timber-testing laboratory at the University of Washington, show the comparative values of green and fire-killed timber. In the States of Colorado, Montana, Nevada, Utah and Wyoming, it is estimated that nearly one billion feet of dead timber is to be found in the National forests, and this has led to the study of the problem of saving this vast quantity of wood for some practical use instead of allowing it to go to waste or furnish fuel for conflagrations.

The results of the tests indicate that the killing of timber by fire is not in itself injurious, and that if it it is cut in time it may simply be regarded as seasoned timber, entirely fit for lumber. If allowed to stand too long, however—a year is a safe limit—the wood is marred by the opening up of cracks, called "checks" by lumbermen. For such purposes as railroad ties, for which checks are not so important, timber may prove satisfactory after having been dead fifty years.

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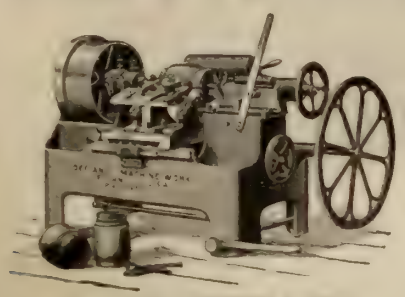

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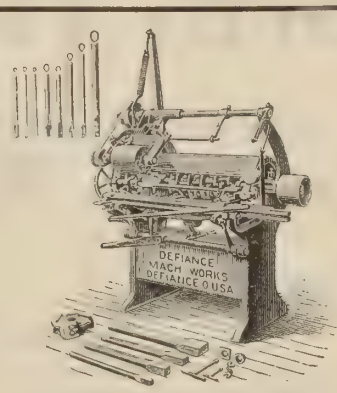

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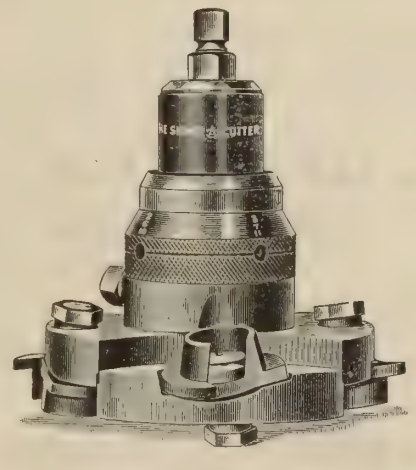

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SHIPMENTS: 1905, by rail 37,942,186 feet.
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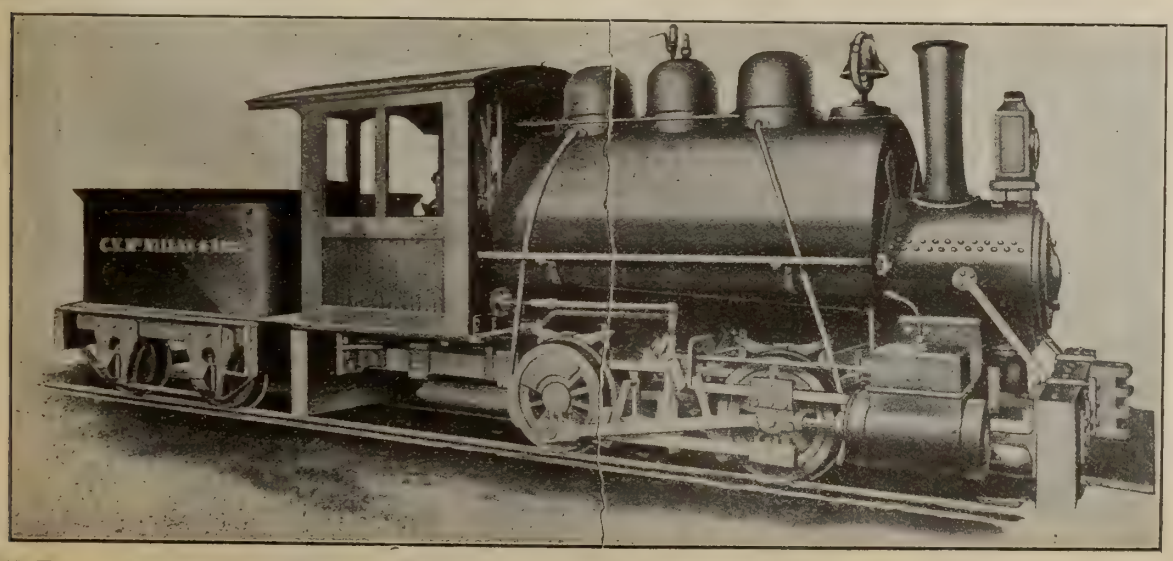
Fully equipped dry kiln, machine shop, blacksmith shop, electric light plant and fire station.



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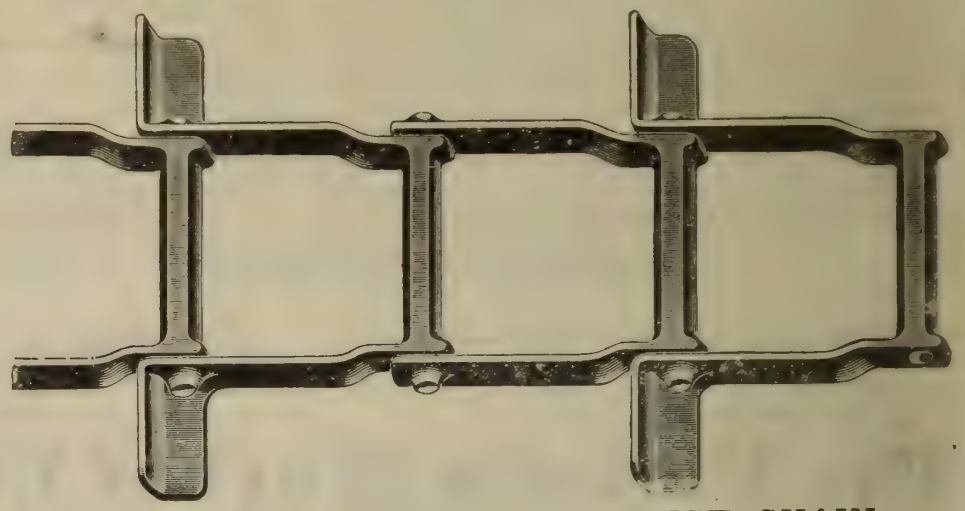

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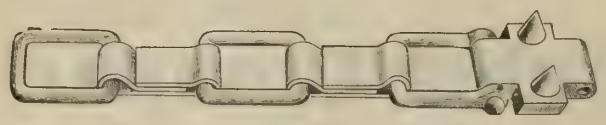

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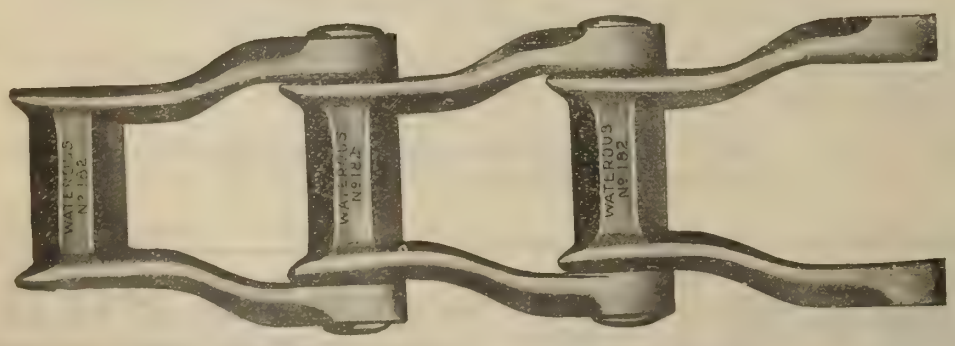

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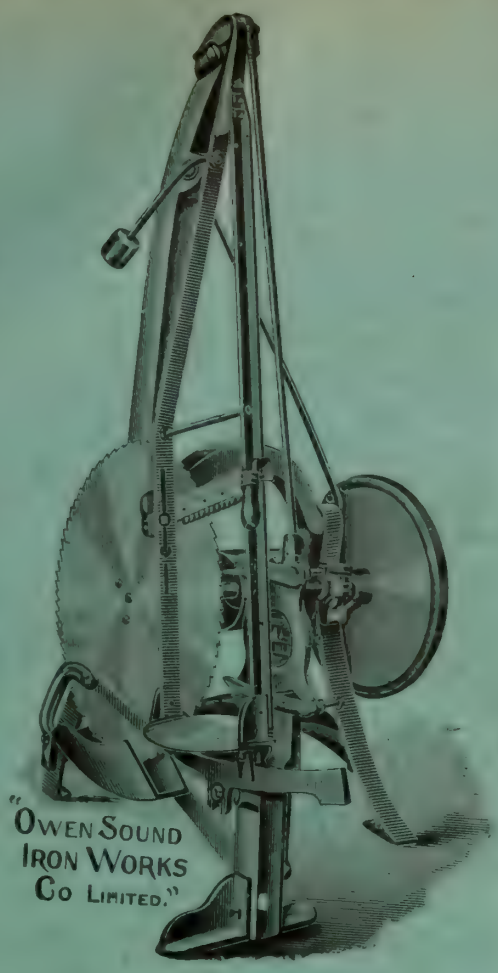

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Lath Mill and Picket Machinery

OF DIFFERENT SIZES AND CAPACITIES MANUFACTURED BY

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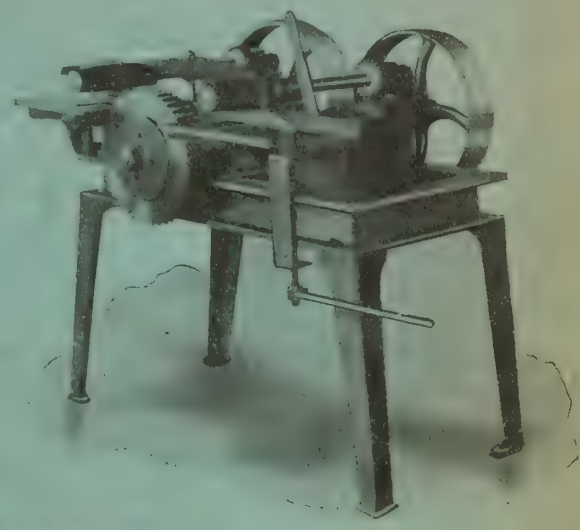

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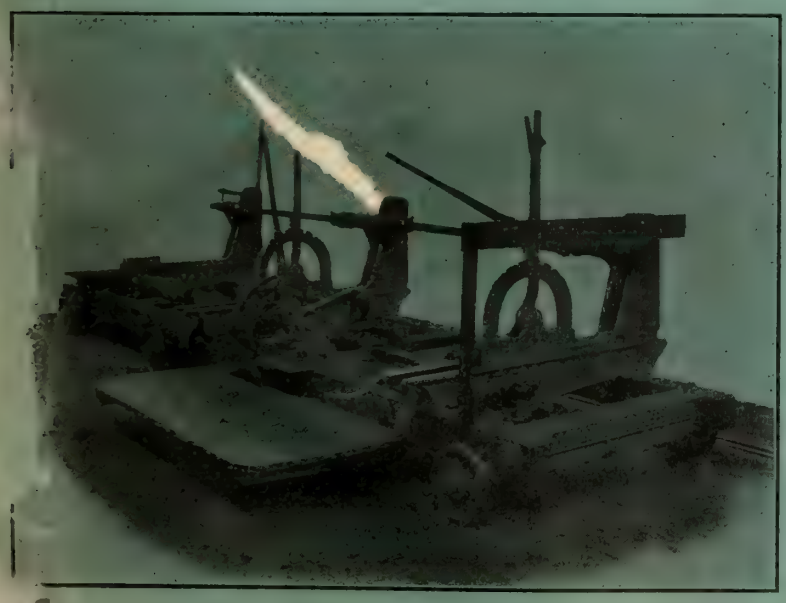
Manufacturers of Up-to-date

SAW, SHINGLE AND LATH MILL MACHINERY



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